IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY, PETITIONER

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND THE UNITED STATES OF AMERICA, RESPONDENTS

METROPOLITAN EDISON COMPANY *et al.* (PUBLIC UTILITIES), INTERVENORS

Petition for Review of an Order of the Nuclear Regulatory Commission

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Argued November 17, 1981

Amended Judgment filed April 2, 1982

Opinions filed May 14, 1982

William S. Jordan, III for petitioner.

Peter G. Crane, Attorney, Nuclear Regulatory Commission, with whom *Stephen F. Eilperin*, Solicitor, Nuclear Regulatory Commission, and *Peter R. Steenland*,

Jr. and *Jacques B. Gelin*, Attorneys, Department of Justice, were on the brief, for respondents.

James B. Hamlin, with whom *George F. Trowbridge* and *Mark Augenblick* were on the brief, for intervenors.

Before WRIGHT, *Circuit Judge*, MCGOWAN, *Senior Circuit Judge*, and WILKEY, *Circuit Judge*.

Opinion for the court on the National Environmental Policy Act issue, concurred in by *Senior Circuit Judge* MCGOWAN, filed by *Circuit Judge* WRIGHT. *Circuit Judge* WILKEY dissents in Parts I and III of his opinion.

Senior Circuit Judge MCGOWAN concurs in Part II of *Circuit Judge* WILKEY's opinion, thereby making that Part the opinion of the court on the Atomic Energy Act issue. *Circuit Judge* WRIGHT dissents on the Atomic Energy Act issue and files an opinion.

WRIGHT, *Circuit Judge*: On March 28, 1979 Three Mile Island Unit 2, a nuclear reactor operated by Metropolitan Edison Company, was seriously damaged in the worst nuclear accident Americans have yet experienced. The incident precipitated widespread alarm and led to the evacuation of many neighboring residents from their homes. At the time of the event, Three Mile Island Unit 1 (TMI-1), another Metropolitan Edison nuclear reactor of similar design which shared some common facilities with Unit 2 (TMI-2), was not in operation. The Nuclear Regulatory Commission (Commission) ordered that it remain in a cold shutdown condition pending further investigation of whether it could be operated safely. Since then the Commission has held extensive hearings on technical, managerial, and operational issues related to the proposed restart of TMI-1. The Commission has refused, however, to consider whether renewed operation of TMI-1 might cause severe psychological harm to neighboring residents and serious economic and social deterioration in nearby communities.

People Against Nuclear Energy (PANE), one of the intervenors in the restart proceeding, is composed primarily of neighbors of TMI. It seeks judicial review of the Commission's decision to limit the scope of its inquiry in this manner. PANE contends that, under the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.* (1976), and the Atomic Energy Act, 42 U.S.C. § 2133 (1976), the Commission must take into account potential harms to psychological health and community well-being. We hold that these environmental impacts are cognizable under NEPA. Therefore, the Commission must make a threshold determination, based on adequate study, whether the potential psychological health effects of renewed operation of TMI-1 are sufficiently significant that NEPA requires preparation of a supplemental environmental impact statement.[1]

I. Statement of the Case

In 1974 Metropolitan Edison Company received an operating license for Unit 1, a nuclear power plant facility at Three Mile Island, Pennsylvania. Four years later the company received an operating license for Unit 2, a nuclear facility of similar design at the same site. On March 28, 1979 Unit 2 suffered a serious nuclear accident which damaged the reactor, caused acute and widespread anxiety, and led the Governor of Pennsylvania to recommend temporary evacuation of pregnant women and preschool children from a five-mile radius surrounding the plant.

At that time Unit 1 had been taken out of operation for refueling. The Nuclear Regulatory Commission ordered Metropolitan Edison to keep Unit 1 in a cold shut-

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[1] Today this court also holds that the Atomic Energy Act does not require the Commission to consider potential harms to psychological health. *See* Part II of Judge Wilkey's opinion. Judge Wright dissents from the Atomic Energy Act holding. *See* Judge Wright's dissenting opinion, *infra*.

down condition pending further order by the Commission. It also announced that a hearing would be conducted to determine whether TMI-1 operations could safely be resumed. Order of July 2, 1979, 44 Fed. Reg. 40461 (1979), Joint Appendix (JA) 21. On August 9, the Commission published an order and notice of hearing regarding the restart of TMI-1. 10 NRC 141-151 (1979), JA 22. Specifying a number of issues for consideration at the hearing, the Commission's order also stated, "While real and substantial concern attaches to issues such as psychological distress and others arising from the continuing impact of aspects of the Three Mile Island accident unrelated directly to exposure to radiation on the part of citizens living near the plant, the Commission has not determined whether such issues can be legally relevant to this proceeding." The Commission invited parties wishing to raise such subjects in the restart proceeding to submit briefs to the Commission's Atomic Safety and Licensing Board (Licensing Board) for consideration. 10 NRC at 148, JA 29.

Petitioner PANE, an intervenor in the restart proceeding, filed two draft contentions which are at issue in this case: it asserted, first, that restart of TMI-1 would cause severe psychological distress to persons living in the vicinity of the reactor, and second, that renewed operations would seriously damage the stability, cohesiveness, and well-being of the neighboring communities because it would perpetuate loss of citizen confidence in community institutions and would discourage economic growth. JA 84-86. In support of its draft contentions, PANE submitted a supporting brief, JA 91-117, and a preliminary plan for presentation of evidence on psychological distress, JA 88-90.

After considering briefs from PANE, other intervenors, the Commonwealth of Pennsylvania, the licensee, and the Commission's staff, the Licensing Board issued a certification to the Commission on psychological dis-

tress issues. 11 NRC 297 (1980), JA 63. Discussing legal issues arising from the Atomic Energy Act and NEPA, the Board concluded that "the Commission, within its discretion, may and should consider psychological distress and community fears under NEPA for the purpose of mitigating the effects of its TMI-1 licensing activity." *Id.* The Licensing Board accepted the contentions of the staff and the licensee that the Commission's responsibility under the Atomic Energy Act to protect the "public health and safety" did not extend to psychological health. It described the issue as a question of first impression. "[P]sychological stress," it concluded, "is probably not cognizable under the Atomic Energy Act but * * * the Commission might conclude to the contrary for reasons not discussed by the parties." 11 NRC at 299, JA 65. On the other hand, the Board agreed with PANE that psychological distress was cognizable under NEPA. It asserted that psychological factors were sufficiently quantifiable to be considered, 11 NRC at 301-303, JA 67-69. Considering psychological factors in the restart proceeding would assist the Commission in mitigating community fears, the Board explained. 11 NRC at 305-309, JA 71-75. It took no position on whether the Commission should prepare an environmental impact statement. 11 NRC at 304-305, JA 70-71.

When the Commission initially voted, in December 1980, on the question of whether to include psychological distress issues in the restart proceeding, one of the five seats on the Commission was vacant. The four Commissioners were evenly divided. Each Commissioner wrote a separate opinion expressing different reasons for his vote. Then-Chairman Ahearne and Commissioner Hendrie voted to exclude psychological stress issues. Then-Chairman Ahearne believed that the Commission was permitted, but not required, to consider psychological stress and community fears, but maintained that the best way to minimize these fears was to ensure that the

plant was safe before approving restart. 12 NRC 609-611 (1980), JA 3-5. Commissioner Hendrie took the position that neither the Atomic Energy Act nor NEPA required the Commission to consider public fears, and he added, "Congress had already decided that the country is to have a nuclear power program even if it makes some people uneasy." 12 NRC at 612-618, JA 6-12.

Commissioners Gilinsky and Bradford voted to allow psychological stress contentions to be considered in the Licensing Board proceeding. Commissioner Gilinsky was influenced by the Licensing Board's recommendation and, more importantly, by the contention of the Commonwealth of Pennsylvania that the Commission should investigate and consider the psychological effects of restarting TMI-1. 12 NRC at 619-620, JA 13-14. Also accepting the Licensing Board's analysis, Commissioner Bradford noted that no other agency had authority to assess and act on stress-related issues in connection with restart of TMI-1. 12 NRC at 624, JA 18. He asserted that full consideration of the extent of stress was the most effective way to deal with stress-related harms. 12 NRC at 621-626, JA 15-20.

The 2-to-2 vote constituted an effective rejection of the Licensing Board's recommendation. Therefore the evidentiary hearing proceeded without consideration of PANE's psychological distress and community deterioration contentions.[2] In addition, the Commission staff ex-

[2] The Licensing Board, after extensive hearings, issued a first partial initial decision on August 27, 1981, dealing with management issues, and a second partial initial decision on December 14, 1981, discussing plant design and procedures, separation issues, and emergency planning issues. The Board concluded that TMI-1 could be operated in the short term without endangering the health and safety of the public and that the licensee had made reasonable progress with respect to various long-term actions which provided reasonable assurance of safe operation in the long term. The Commission has not yet determined whether the Board's decision on the ac-

cluded these issues from its environmental impact appraisal, submitted to the Commission in March 1981 and supplemented in May 1981, which recommended that no environmental impact statement be prepared in connection with the proposed restart of TMI-1.[3] On September 17, 1981, after the appointment of a fifth Commissioner, Chairman Nunzio Palladino, the Commission adhered by a vote of 3-to-2 to its previous result. Chairman Palladino did not write an opinion or concur in any of the previous opinions.

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ceptability of restart at low power should be made effective. A judgment of this court, issued January 7, 1982, ordered the Commission not to "make a decision to restart TMI-1" until it had complied with the requirements of NEPA as set forth in the previous paragraph of the order. On April 2, 1982 this court amended its judgment, vacating the injunction but ordering the Commission to give 30 days' notice to the court and to petitioner if it "intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA."

[3] Early in the proceeding several intervenors filed contentions that an environmental impact statement (EIS) should be prepared before the Commission decided whether to restart TMI-1. The Commission staff took the position that no EIS was required. Pursuant to Commission regulations, it undertook to prepare an environmental impact appraisal (EIA) setting forth the basis for its position that NEPA did not require an EIS on the restart decision. On March 27, 1981 the staff issued an EIA. In response to criticisms expressed by the Commonwealth of Pennsylvania regarding the adequacy of the EIA, the staff supplemented the appraisal on May 11, 1981. Neither document addressed the contentions raised by PANE—psychological health effects and community deterioration in the area surrounding Three Mile Island. On December 15, 1981 the Licensing Board issued a memorandum and order stating its conclusion that there was no need for any additional evidentiary hearings on any of the contentions relating to the adequacy of the EIA or the need for an EIS, and that there was no basis for ruling that the EIA was inadequate or that an EIS should be prepared. Memorandum and Order on NEPA—Compliance Issues, December 15, 1981.

PANE filed a petition for review of the Commission's order, issued December 5, 1980, which excluded its psychological stress and community deterioration contentions from the TMI-1 restart proceeding. It sought reversal on the basis of the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* (1976), and the Atomic Energy Act, 42 U.S.C. § 2133 (1976).

On January 7, 1982 this court issued an interim judgment, pending issuance of opinions, which ordered the Commission to prepare an environmental assessment of the effects of the proposed TMI-1 restart on the psychological health of neighboring residents and on the well-being of the surrounding communities. The judgment ordered the Commission to determine on the basis of this study whether to prepare a supplemental environmental impact statement. Until the Commission had complied with the requirements of NEPA, it was ordered not to make any decision to restart TMI-1. On the Atomic Energy Act question this court ordered the Commission to submit to the court a statement of its reasons for concluding that the statute did not require consideration of psychological health in the restart proceeding. Judge Wilkey dissented from the judgment. The Commission's statement of reasons was filed with this court on March 30, 1982.

After further consideration of the NEPA issues, the court replaced the January 7, 1982 judgment with an amended judgment, entered on April 2, 1982.[4] The amended judgment gave the Commission discretion to choose its procedures for studying the significance of the alleged psychological health impacts arising from the proposed restart of TMI-1. It made clear that the initial study should focus on psychological health effects. The

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[4] Much of Judge Wilkey's dissent is directed to the January 7, 1982 judgment, which was replaced on April 2, 1982 and is no longer in effect. The opinion of the court discusses only the requirements set forth in the amended judgment.

Commission would be required to consider the secondary impacts on community well-being only if a full supplemental EIS was prepared. Finally, noting that the operators of TMI-1 had announced that extensive corrosion problems were likely to delay the restart by six to twelve months,[5] the amended judgment lifted the injunction against restart as unnecessary to preserve the status quo. The court instructed the Commission, however, to give notice to the court and to petitioner if subsequently it intended to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA.

II. National Environmental Policy Act

The National Environmental Policy Act is designed to assure that governmental agencies take a "hard look" at the environmental consequences of major proposed actions, and that they adjust ongoing programs in light of new information or changed circumstances. PANE urges us to hold that NEPA requires the Commission to prepare a new or supplemental environmental impact statement (EIS) on the psychological health effects and community deterioration that might result from restart of TMI-1. We agree with PANE that these environmental effects fall within the scope of NEPA, and that the Commission has a continuing responsibility to comply with NEPA's procedural requirements in its supervision of licensed nuclear facilities, including TMI-1. At the same time, we recognize the agency's role in making a threshold determination of whether changed circumstances and new information regarding environmental effects require a supplemental EIS. We therefore remand the record to the Commission for a decision on the EIS question.

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[5] New York Times, Feb. 11, 1982, A18, at col. 1.

A. *Cognizability of Psychological Health and Community Deterioration*

PANE contends that NEPA requires the Commission to prepare a new or revised EIS to evaluate two distinct environmental effects of reopening TMI-1. First, PANE alleges that renewed operation of the nuclear reactor would cause "severe psychological distress" to persons living in the vicinity of the reactor, including PANE's members. According to PANE, the accident at TMI-2 created intense anxiety, tension, and fear, accompanied by physical disorders including skin rashes, aggravated ulcers, and skeletal and muscular problems. JA 84-86. Post-traumatic neurosis, PANE asserts, can be diagnosed with reasonable medical certainty on the basis of standardized quantitative tests. Petitioner's brief at 46-47. Moreover, PANE argues, reopening TMI-1 would severely aggravate existing problems and would prevent Three Mile Island's neighbors from resolving and recovering from the trauma they have suffered. JA 84-86.

Second, PANE contends that resumption of operations at TMI-1 would cause severe harm to the "stability, cohesiveness and well being of the communities in the vicinity of the reactor." *Id.* In petitioner's view, citizens have lost confidence in the ability of community institutions to function effectively during a crisis; therefore the renewed danger of nuclear accidents would impose great strains on the community infrastructure. Moreover, PANE asserts, restarting TMI-1 would perpetuate the area's image as an undesirable location for residents and businesses, thus causing permanent damage to the economic and social health of the community.

Thus PANE's first contention deals with individual health; its second addresses the social and economic impacts that perceived nuclear hazards might create in the communities in the vicinity of Three Mile Island. Both contentions allege environmental effects within the meaning of NEPA.

1. *Potential damage to psychological health*

The President's Commission on the Accident at Three Mile Island reported that the "major health effect of the accident appears to have been on the mental health of the people living in the region of Three Mile Island and of the workers at TMI." REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, THE NEED FOR CHANGE: THE LEGACY OF TMI at 35 (Oct. 1979), JA 267. As the Nuclear Regulatory Commission's staff has acknowledged, a great deal of study and attention has been devoted to attempts to measure the effects of the March 1979 accident at TMI-2 upon persons in the area, "including attempts to measure effects on mental health." JA 177. The staff listed a number of separate studies, conducted by organizations including the Hershey Medical Center, the Pennsylvania Department of Health, the Western Psychiatric Institute of the University of Pittsburgh, and Central Pennsylvania Blue Shield, that considered the psychological effects of the Three Mile Island accident. *Id.*

Nevertheless, the Commission's brief contends that the psychological effects alleged by PANE, which were caused by the TMI-2 accident and would assertedly be perpetuated by restart of TMI-1, are beyond the scope of NEPA. Commission's brief at 50-55. This assertion is far-reaching. Regardless of the severity of psychological health effects, the position taken in the Commission's brief would exclude them from consideration at any stage of the NEPA procedures relating to any proposed federal action. We find this interpretation of NEPA unpersuasive.[6] The Commission's brief ignores the simple fact

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[6] The question whether NEPA requires consideration of psychological health effects is an issue of law. *See Hanly v. Kleindienst*, 471 F.2d 823, 838 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973). Because NEPA is a mandate addressed by Congress to all federal agencies, 42 U.S.C. §§ 4331(b), 4332(2) (1976), the Commission's position is not entitled to

that effects on psychological health are effects on the health of human beings.

In the National Environmental Policy Act, Congress accorded prominence to the effects of government actions on health and safety. NEPA was designed to "promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." 42 U.S.C. § 4321 (1976). The Act declared a national environmental policy of "encourag-[ing] productive and enjoyable harmony between man and his environment," *id.*, and explicitly recognized that each person "should enjoy a healthful environment," *id.* § 4331(c).[7] In its regulations implementing NEPA's procedural requirements, the Council on Environmental Quality required agencies to consider "[t]he degree to which the proposed action affects public health and safety" as a factor in deciding whether a federal action "significantly" affected the human environment. 40 C.F.R. § 1508.27(b)(2) (1981). In short, "[n]o subject to be covered by an EIS can be more important

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the deference that courts must give to an agency's interpretation of its governing statute. *See FEC v. Democratic Senatorial Campaign Committee*, —— U.S. ——, ——, 50 U.S.L.W. 4001, 4004 (Nov. 10, 1981).

[7] 42 U.S.C. § 4331(b) (1976) establishes the goals of "assur[ing] for all Americans *safe, healthful*, productive, and esthetically and culturally pleasing surroundings," *id.* § 4331(b)(2), and "attain[ing] the widest range of beneficial uses of the environment without degradation, *risk to health or safety*, or other undesirable and unintended consequences," *id.* § 4331(b)(3) (emphases added). *See* 40 C.F.R. § 1508.8 (1981) ("effects" under NEPA include direct, indirect, and cumulative health effects); *id.* § 1508.27 (interpretation of whether action has "significant" impact on human environment includes "degree to which the proposed action affects public health and safety"); 115 Cong. Rec. 40416 (1960) (statement of Senator Jackson that NEPA declares that "we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind").

than the potential effects of a federal program upon the health of human beings." *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F.Supp. 908, 927 (D. Ore. 1977).[8]

We conclude that, in the context of NEPA, health encompasses psychological health. To implement a national policy based on "the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man," 42 U.S.C. § 4331(a) (1976), Congress required each federal agency to utilize a "systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts." *Id.* § 4332(2)(A); *see* 40 C.F.R. §§ 1502.6, 1507.2 (1981); *cf. Chelsea Neighborhood Ass'ns v. U.S. Postal Service*, 516 F.2d 378, 388 (2d Cir. 1975) (social as well as physical sciences relevant under NEPA; agency must consider dangers of emotional and physical isolation of high-rise apartment building, which might as a result become a "human jungle").

Although we are not aware of any cases that have considered the cognizability of post-traumatic psychological health effects under NEPA, it is not surprising that this is an issue of first impression. Americans have never before experienced the psychological aftermath of a major accident at a nuclear power plant, one that aroused fears of a nuclear core meltdown and led to mass evacua-

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[8] *See Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1039-1040 (D.C. Cir. 1973) (allegations that inadequate water run-off system will endanger health by causing floods; agency must consider "genuine issues as to health" before deciding whether to prepare an environmental impact statement); *Nat'l Organization for Reform of Marijuana Laws v. U.S. Dep't of State*, 452 F.Supp. 1226, 1232 (D. D.C. 1978) (department must prepare EIS with respect to U.S. participation in herbicide spraying of marijuana and poppy plants in Mexico because of potential health hazards associated with contaminated marijuana).

tion from the surrounding communities. *See* REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, *supra*, JA 257-271. PANE alleges that restarting TMI-1 would perpetuate the psychological health effects of the TMI-2 accident—intense anxiety, tension, and fear accompanied by physical disorders. Despite the sweeping language of Judge Wilkey's dissent, PANE is not seeking to extend NEPA to "mere 'anxieties.'" Wilkey dissent at 11.

Nevertheless, the Commission's brief contends that psychological distress is beyond the scope of NEPA because it is not readily quantifiable. Commission's brief at 51-52. The Commission's staff was unable to state "with any degree of certainty whether the psychic distress associated with continued operation of the TMI 1 facility is sufficiently susceptible of measurement to permit a meaningful assessment of the phenomenon." 11 NRC at 305, JA 71. On the other hand, the Licensing Board asserted that psychological factors were sufficiently quantifiable to be considered, noting that "some quantification of stress upon the community is being undertaken by responsible organizations." 11 NRC at 302, JA 68. NEPA, moreover, does not authorize federal agencies to deal with intangible factors by ignoring them. It expressly instructs all federal agencies to identify and develop methods and procedures "which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations." 42 U.S.C. § 4332(2)(B) (1976).[9] This expression of congressional purpose led the Commission's Licensing Board to conclude, correctly, that "[p]recise

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[9] In its binding regulations to implement NEPA's procedural requirements the Council on Environmental Quality defined the term "human environment" as "the natural and physical environment and the relationship of people with that environment." 40 C.F.R. § 1508.04 (1981).

numerical quantification is not necessary" under NEPA. 11 NRC at 302, JA 68.

To support its position that "psychological distress" need not be considered at all in the NEPA process, the Commission's brief relies on cases that rejected the cognizability of sociologically based community anxieties. Commission's brief at 50-55. In these cases neighborhood associations, businesses, or other groups unsuccessfully sought to use NEPA to block or delay proposed construction of government projects—low-income housing, federal detention centers, Job Corps centers, postal service facilities—primarily because they were afraid the projects would change the character of the neighborhood, reduce property values, and increase the dangers of crime. *See, e.g., Como-Falcon Community Coalition, Inc. v. U.S. Dep't of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980) (Job Corps center); *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976) (low-rent housing for low-income families); *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service*, 487 F.2d 1029, 1037 (D.C. Cir. 1973) (bulk mail postal facility in suburban area); *First Nat'l Bank of Chicago v. Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973) (federal parking garage and detention center in downtown area); *Hanly v. Kleindienst*, 471 F.2d 823, 833 & n.10 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973) (detention center in downtown area not far from residential apartments). None of these cases, of course, presents the holocaust potential of an errant nuclear reactor.

In these and other cases federal courts have consistently rejected the contention that socioeconomic anxieties are environmental impacts within the meaning of NEPA. The agency fulfills its responsibilities under NEPA in this context if it considers and mitigates the underlying causes for alarm, such as the possibility of increased

noise, increased crime, and increased congestion. "Concerned persons might fashion a claim, supported by linguistics and etymology, that there is an impact from people pollution on 'environment,' if the term be stretched to its maximum," Judge Leventhal explained. "We think this type of effect cannot fairly be projected as having been within the contemplation of Congress." *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service, supra*, 487 F.2d at 1037; *see Nucleus of Chicago Homeowners Ass'n v. Lynn, supra*, 524 F.2d at 231.

In this case, in contrast, PANE is not asking the agency to evaluate the effect of "people pollution" on the environment, but rather the effect of a governmental decision on human health. We conclude that PANE's allegation—in the wake of a unique and traumatic nuclear accident—that renewed operation of TMI-1 may cause medically recognized impairment of the psychological health of neighboring residents is cognizable under NEPA.

The key to our decision is the potential effect on health. Not all physical effects have an impact on physical health; similarly, not all psychological effects rise to the level of psychological health effects. In our view, Congress intended to include psychological *health* within the meaning of "health" for purposes of NEPA. NEPA does not encompass mere dissatisfactions arising from social opinions, economic concerns, or political disagreements with agency policies.[10] It does apply to post-

[10] *See* cases cited in text *supra*. Similarly, in the esthetic realm Judge Leventhal recognized that some effects were intended by Congress to be considered and that others, pertaining "essentially to issues of individual and potentially diverse tastes," were outside the scope of NEPA. *See Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service, supra* note 8, 487 F.2d at 1038-1039. He referred to psychological factors as an analogy; in both realms, he wrote, some questions are "not readily translatable into concrete

traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe. Therefore, the severity of a psychological effect is not only relevant to whether an EIS is required under NEPA, as Judge Wilkey concedes, Wilkey dissent at 13, but also to the cognizability of the impact under the statute.

We need not attempt to draw a bright line in this case. Three Mile Island is, at least so far, the only event of its kind in the American experience. We cannot believe that the psychological aftermath of the March 1979 accident falls outside the broad scope of the National Environmental Policy Act.

2. *Possible deterioration of the community*

PANE's second contention alleges that the communities surrounding Three Mile Island would be severely damaged by the proposed restart of the TMI-1 facility because fears of nuclear accidents will diminish citizen confidence in local institutions, cause local businesses and residents to leave the area, and discourage potential newcomers who perceive the area as an undesirable location. JA 85-86. The Commission concedes that this contention presents a "classical 'socio-economic' issue." Commission's brief at 49. Social and economic effects, also described as "secondary impacts," do not by themselves require preparation of an environmental impact statement. 40 C.F.R. § 1508.04 (1981) (mandatory Council on Environmental Quality regulations).[11] However,

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measuring rods." *Id., quoting Hanly v. Kleindienst, supra* note 6, 471 F.2d at 833 n.10. But the difficulty of measurement does not exclude the beauty of scenery in the national parks from consideration under NEPA, nor should it exclude the medically diagnosed effects of traumatic accidents on the human mind.

[11] *See Como-Falcon Community Coalition, Inc. v. U.S. Dep't of Labor*, 609 F.2d 342, 345-346 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Image of Greater San Antonio, Texas v. Brown*, 570 F.2d 517, 522-523 (5th Cir. 1978);

when an environmental impact statement is prepared, it must discuss economic or social effects that are interrelated with other environmental effects. *Id.* Deterioration of a community's economic base or social stability, as alleged in PANE's second contention, is a cognizable "secondary impact" under NEPA. *See, e.g., City of Rochester v. U.S. Postal Service*, 541 F.2d 967, 973 (2d Cir. 1976) (danger of economic and physical deterioration in downtown area, urban decay and blight); *Trinity Episcopal School Corp. v. Romney*, 523 F.2d 88, 93-94 (2d Cir. 1975) (displacement and relocation of residents, decay and blight, implications for city growth policy and neighborhood stability). If NEPA requires the Commission to prepare a supplemental EIS regarding the TMI-1 restart decision because the agency makes a threshold finding of significant new information on psychological health effects, *see* Part II-C *infra*, PANE's contentions regarding secondary effects on the community must be evaluated in the supplemental EIS.

B. *Applicability of NEPA to the TMI-1 Restart Decision*

PANE contends that the March 1979 accident at TMI-2 significantly changed the psychological and socioeconomic effects of operating TMI-1. Therefore, PANE argues, the Commission must comply with NEPA before it decides whether to authorize restart of TMI-1's operations. This assertion does not depend on the happen-

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Breckinridge v. Rumsfeld, 537 F.2d 864, 866 (6th Cir. 1976), *cert. denied*, 429 U.S. 1061 (1977); *Monarch Chemical Works, Inc. v. Exon*, 466 F.Supp. 639, 655-656 (D. Neb. 1979); *Nat'l Ass'n of Gov't Employees v. Rumsfeld*, 418 F.Supp. 1302, 1306 (E.D. Pa. 1976); *Nat'l Ass'n of Gov't Employees v. Rumsfeld*, 413 F.Supp. 1224, 1229-1230 (D. D.C. 1976), *aff'd mem.*, 556 F.2d 76 (D.C. Cir. 1977). *Contra, Jackson County, Mo. v. Jones*, 571 F.2d 1004, 1007 (8th Cir. 1978) (proposed closing of most of an Air Force Base); *McDowell v. Schlesinger*, 404 F.Supp. 221 (W.D. Mo. 1975) (same).

stance that TMI-1 was shut down for refueling at the time of the accident. PANE relies more generally on the continuing close supervision that the Commission exercises over nuclear power plants under the Atomic Energy Act. We agree with PANE that the extent of the Commission's statutory responsibilities over licensed nuclear facilities creates a continuing obligation to comply with NEPA.[12]

The Commission's brief contends that its pending decision on whether to allow resumption of operations at TMI-1 is not a "major federal action" within the National Environmental Policy Act and is therefore not subject to NEPA's requirements. Conceding that the initial grant of an operating license requires preparation of an EIS, the brief asserts that, once a private activity such as a nuclear reactor has been licensed, federal involvement in its continuation is "limited and discontinuous" and therefore "lacks the elements of federal purpose and discretion generally associated with the requirement for impact statements." Commission's brief at 46. This position takes too narrow a view of the relevant federal activity. The "major federal action" in the case of TMI-1 is not solely the initial licensing decision, but the Commission's continued exercise of supervisory responsibility over its operation and maintenance.

The position argued in the Commission's brief is inconsistent with binding regulations promulgated by the Council on Environmental Quality (CEQ) and with previous judicial decisions defining "major federal actions" for purposes of NEPA. The CEQ regulations, applicable to all federal agencies including the Commission, 40 C.F.R. § 1500.3 (1981), were expressly designed to establish uniform procedures for implementing NEPA

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[12] We remand the record in this case to the Commission to determine what procedures NEPA requires in light of its evaluation of alleged psychological health effects. *See* Part II-C *infra*.

and to eliminate inconsistent agency interpretations. 43 Fed. Reg. 55978 (1978); *see Andrus v. Sierra Club*, 442 U.S. 347, 356-357 (1979).[13] "Federal action," under the regulations, encompasses "new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies." 40 C.F.R. § 1508.18(a) (1981).[14]

The Commission's NEPA responsibilities did not come to an end when it prepared an initial EIS; the "continuing activity" of regulating TMI-1 is federal action within the scope of NEPA. The Commission has an ongoing responsibility to assure that nuclear power plants will operate without endangering the health and safety of the public. 42 U.S.C. §§ 2012(e), 2201(b), 2236 (1976). It maintains a resident inspector at each nuclear facility, *see* 10 C.F.R. § 50.70(b) (1981), and operates a licensing program for nuclear power plant operators, *see id.* §§ 55.1-55.60.

In the immediate aftermath of the nuclear accident at TMI-2 the Commission ordered Metropolitan Edison, the

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[13] The CEQ regulations were issued pursuant to Executive Order 11991, May 24, 1977, 3 C.F.R. 124 (1978). The Executive Order was based on the President's constitutional and statutory authority, including NEPA, the Environmental Quality Improvement Act, and § 309 of the Clean Air Act. The Executive Order delegated the President's authority to the CEQ, an agency created by NEPA. 43 Fed. Reg. 55978 (1978).

[14] We are not persuaded by the Commission's argument that the TMI-1 restart proceeding is exempt from NEPA because it is an enforcement action. *See* 10 C.F.R. § 51.5(d)(1) (1981) (NRC regulations implementing more general CEQ guidelines). Unlike initiating an investigation or filing a complaint in federal court, resumption of nuclear operations at TMI-1 might have a direct and immediate effect on psychological health or community well-being.

licensee, to keep TMI-1 in a cold shutdown condition pending further order by the Commission, and stated that a hearing would be held before the reactor would be authorized to resume operation. The order explains that the agency "presently lacks the requisite reasonable assurance that the same licensee's Three Mile Island Unit No. 1 facility * * * can be operated without endangering the health and safety of the public," 44 Fed. Reg. 40461 (1979), language that echoes the Atomic Energy Act. Pursuant to its July 1979 order, the Commission received written and oral testimony at an evidentiary hearing from witnesses presented by the licensee, the Commission's staff, the Commonwealth of Pennsylvania, and five intervenors. Atomic Safety and Licensing Board, Partial Initial Decision (Procedural Background and Management Issues) at 12 (Aug. 27, 1981). The record of the proceeding covers more than 22,000 transcript pages. Memorandum on the Status of the Three Mile Island Unit 1 Restart Proceeding, filed by the Commission with this court on November 25, 1981. These regulatory activities fall squarely within the language of the CEQ regulation defining "federal action." 40 C.F.R. § 1508.18(a) (1981) (quoted *supra*).

Judicial decisions antedating the CEQ regulations defined "federal action" similarly in concrete factual contexts. The central issue in determining the applicability of NEPA to federally assisted or federally regulated projects was whether agency decisions were yet to be made, and whether decisions, "although already made, remain[ed] open to revision." *Jones v. Lynn*, 477 F.2d 885, 890 (1st Cir. 1973). In *Jones v. Lynn* the basic loan and capital grant contract for an urban renewal project had been executed before NEPA entered into effect, but the court held that NEPA procedures must be followed as long as the federal agency "remains meaningfully involved in a project" and has "retained any significant discretionary powers." *Id.* at 889-890 (remanding for

findings by District Court).[15] In *WATCH (Waterbury Action to Conserve Our Heritage Inc.) v. Harris*, 603 F.2d 310, 317-318 (2d Cir.), *cert. denied*, 444 U.S. 995 (1979), the federal Department of Housing and Urban Development had authorized demolition of buildings within a specified urban renewal area but retained power to veto specific actions by local authorities. When HUD received new information about the potential historic value of structures within the demolition area, it imposed a temporary freeze on further acquisitions and demolitions, gathered some data about the structures, and then authorized demolition to continue. A local organization sought judicial review of the agency's failure to follow NEPA procedures before deciding whether to continue with the demolition project. The Second Circuit, recognizing that HUD retained "significant control over the project," and that the agency had recognized its continuing responsibility by imposing a freeze, held that HUD was required to comply with NEPA. 603 F.2d at 318, 326.

The Commission's brief cannot convincingly distinguish these precedents by asserting that, unlike this case, they involved "a more or less continuing agency decision to sustain an ongoing program that the agency has discretion to terminate at any time." Commission's brief at 46. The Commission's regulatory responsibilities with regard to TMI-1 and other nuclear reactors place it in

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[15] This principle has been applied to require agencies to follow NEPA procedures in a number of projects approved and commenced before the effective date of the Act. *See, e.g., Hart v. Denver Urban Renewal Authority*, 551 F.2d 1178, 1181 (10th Cir. 1977) (urban renewal project); *Swain v. Brinegar*, 517 F.2d 766, 773-774 (7th Cir. 1975) (highway construction); *Scherr v. Volpe*, 466 F.2d 1027, 1034-1035 (7th Cir. 1972) (highway construction); *Arlington Coalition on Transportation v. Volpe*, 458 F.2d 1323, 1328 (4th Cir. 1972), *cert. denied*, 409 U.S. 1000 (1972) (highway construction).

an analogous position; therefore, it must continue to comply with NEPA's requirements.

C. *The Commission's Responsibilities Under NEPA*

If the agency's "continuing activities" are within the scope of NEPA, the CEQ regulations require it to prepare a supplemental environmental impact statement in two situations: (1) if the agency makes substantial changes in the proposed action that are relevant to environmental concerns, or (2) if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. 40 C.F.R. § 1502.9(c)(1) (1982).[16] Supplemental impact statements shall be prepared, circulated, and filed in the same fashion as draft or final environmental impact statements. *Id.* § 1502.9(c)(4). These regulations implement the broad purpose of NEPA: to require the federal government to assume "continuing responsibility" to promote environmental values. *See* 42 U.S.C. § 4331(b) (1976). NEPA itself does not expressly provide for supplemental impact statements, but the Supreme Court has declared that the CEQ implementing regulations are "entitled to substantial deference" as an interpretation of NEPA. *Andrus v. Sierra Club*, *supra*, 442 U.S. at 358.[17]

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[16] If no "substantial changes" occur and no "significant new circumstances or information relevant to environmental concerns" arise, the regulatory agency will have no obligation to take any further action under NEPA. The environmental impacts described in the original EIS will be adequate to describe the continuing effects of the regulated activity. Therefore, the court's holding—which simply reiterates well established principles—does not "significantly increase the NEPA burden on regulatory agencies in the future." Wilkey dissent at 20.

[17] The Court rested its deference on the CEQ's statutory responsibility under NEPA and on the "detailed and comprehensive process" by which the CEQ transformed advisory guidelines into mandatory regulations applicable to all federal agencies. 442 U.S. at 358.

In this case PANE contends that the accident at TMI-2 in March 1979 was a "significant new circumstance" that dramatically altered the environmental effects of operating TMI-1. It cites not only the CEQ regulations, but earlier judicial decisions that required preparation of a supplemental EIS to take changed circumstances and new information into account. In *Essex County Preservation Ass'n v. Campbell*, 536 F.2d 956, 961 (1st Cir. 1981), relying on federal highway regulations, the court required a supplemental EIS for a proposed highway project after a state moratorium on widening of a feeder highway reduced the potential flow of traffic to the proposed highway segment. In several District Court cases, discovery of archeological sites within an affected area has been held to require a supplemental EIS. *Libby Rod & Gun Club v. Poteat*, 457 F.Supp. 1177, 1188-1189 (D. Mont. 1978) (Army Corps of Engineers dam project); *Aluli v. Brown*, 437 F.Supp. 602, 606 (D. Hawaii 1977), *rev'd in part on different issue*, 602 F.2d 876 (9th Cir. 1979) (Navy bombing practice on Hawaiian island); *Nelson v. Butz*, 377 F.Supp. 819, 822 (D. Minn. 1974) (proposed flooding of area by dam construction).[18]

At this stage, PANE's allegations of psychological health effects and community deterioration do not justify

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[18] Other federal courts have recognized the general rule that a supplemental EIS is required if the agency receives significant new information, although they have not required a supplemental EIS under the circumstances of the particular case. *See Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1023-1025 (9th Cir. 1980) (new information would have required supplemental EIS, but during pendency of appeal agency had made extensive expert studies of new data and had reasonably concluded that environmental effects would not be significant); *Society for Animal Rights, Inc. v. Schlesinger*, 512 F.2d 915 (D.C. Cir. 1975) (as project proceeds, if department gathers "new findings of significance," it must incorporate them into its analysis by amending the original EIS).

an order to the Commission to prepare a supplemental EIS. It is well established that, under NEPA, the agency in charge of a proposed federal action is authorized to make the threshold determination of whether an EIS is required. *See WATCH v. Harris*, *supra*, 603 F.2d at 317-318, 326; *Asphalt Roofing Manufacturers Ass'n v. ICC*, 567 F.2d 994, 1004 (D.C. Cir. 1977); *Hanly v. Kleindienst*, *supra*, 471 F.2d at 828. In this case, however, the Commission staff did not consider psychological health effects in its environmental impact appraisal, JA 272-316, nor did it receive any evidence in support of PANE's contentions. When the Commissioners excluded psychological stress from the TMI-1 restart proceeding, none of the four separate opinions specifically addressed NEPA's requirements for issuance of a supplemental EIS, nor did any Commissioner evaluate any of the existing studies regarding psychological and community effects. *See* 12 NRC at 609-626, JA 3-20.[19] Under the circumstances, we remand the record to the Commission to determine whether to prepare a supplemental EIS.

If the agency finds significant new circumstances or information on psychological health effects, the CEQ regulations require it to prepare a supplemental EIS regarding both psychological health effects and secondary impacts on the well-being of surrounding communities. 40 C.F.R. § 1502.9(c)(1) (1981). On the other hand, if the agency

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[19] Commissioner Hendrie asserted that psychological impacts were outside the scope of NEPA. 12 NRC at 612, 615-618, JA 6, 9-12. Commissioner Ahearne conceded that the Commission should consider psychological effects, but maintained that Commission inquiry into technical safety factors was sufficient to satisfy NEPA's mandate. 12 NRC at 609-611, JA 3-5. Commissioner Bradford agreed with the Licensing Board that the Commission should evaluate psychological evidence, but did not propose preparation of an EIS, 12 NRC at 621-626, JA 15-20, and Commissioner Gilinsky did not discuss NEPA's requirements, 12 NRC at 619-620, JA 13-14. Chairman Palladino, subsequently appointed to the Commission, wrote no opinion.

finds that the circumstances or information are not new, or not significant, it need not prepare a supplemental EIS. The agency's determination, if appealed, will be upheld as long as it is reasonable—the same standard of judicial review that we apply to an agency's determination not to issue an EIS in the first instance. *See Izaak Walton League of America v. Marsh*, 655 F.2d 346, 371 (D.C. Cir. 1981) ("rule of reason" in reviewing compliance with NEPA); *cf. Environmental Defense Fund v. Marsh*, 651 F.2d 983, 991-992 (5th Cir. 1981) (same standard for review of agency decision not to issue EIS or decision not to issue supplemental EIS); *Monarch Chemical Works, Inc. v. Thone*, 604 F.2d 1083, 1087 (8th Cir. 1979) (same).

We agree with the Ninth Circuit's recent discussion of the respective roles of agencies and courts and the "rule of reason" as applied to an agency's decision not to issue a supplemental EIS:

> When new information comes to light the agency must consider it, evaluate it, and make a reasoned determination whether it is of such significance as to require implementation of formal NEPA filing procedures. Reasonableness depends on such factors as the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the agency considered the information and evaluated its impact, and the degree to which the agency supported its decision not to supplement with a statement of explanation or additional data.

Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1024 (9th Cir. 1980).[20]

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[20] Other federal courts have recognized that, before an agency decides whether to issue an EIS, it must undertake at least a preliminary investigation. *See Como-Falcon Community Coalition, Inc. v. U.S. Dep't of Labor, supra* note 11, 609 F.2d at 345 (finding of whether an agency acted in good faith discretion in deciding not to issue EIS depends in part

Until a federal agency has fulfilled its obligations under NEPA, it should generally not proceed with its ultimate decision on whether to proceed with a proposed action. NEPA procedures are designed to ensure that environmental information is available to public officials and citizens before decisions are made, so that environmental considerations are part of the agency's decision-making process. *See Weinberger v. Catholic Action of Hawaii/Peace Education Project*, —— U.S. ——, ——, 50 U.S.L.W. 4027, 4028-4029 (Dec. 1, 1981); *Realty Income Trust v. Eckerd*, 564 F.2d 447, 456 (D.C. Cir. 1977); 40 C.F.R. §§ 1500.1(b), 1502.2(g) (1981). Under appropriate circumstances, federal courts will grant injunctive relief to preserve the status quo until the requirements of NEPA have been satisfied. *See Realty Income Trust v. Eckerd, supra*, 564 F.2d at 456-457.

In this case the court issued an order on January 7, 1982 that the Commission not make a decision to restart TMI-1 until it had complied with its obligations under NEPA. Subsequently, however, operating officials at Three Mile Island announced that leaks and corrosion in thousands of steam generator tubes in TMI-1 would probably delay the restart for six to twelve months. *See Corrosion Leads To More Delays At 3 Mile Island*, New York Times, February 11, 1982, A18, at col. 1. Recognizing that injunctive relief was no longer necessary to preserve the status quo, the court on April 2, 1982 is-

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on the "depth of study of the particular problem"); *Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Service, supra* note 8, 487 F.2d at 1039 (in reviewing environmental assessment court will ask whether agency decided not to issue EIS after a "hard look" at the problem rather than "bald conclusions, unaided by preliminary investigation"); *cf. City of Davis v. Coleman*, 521 F.2d 661, 670-671 (9th Cir. 1975) (NEPA plaintiff has standing without offering proof of alleged effects; otherwise plaintiff would be required to conduct the "same environmental investigation that he seeks in his suit to compel the agency to undertake").

sued an amended judgment lifting the injunction. The amended judgment, which remains in effect, requires the Commission to give 30 days' notice to this court and to petitioner if the Commission intends to make a decision on restarting TMI-1 before complying with its obligations under NEPA. When such notice is given, it will be time enough for this court to decide whether an injunction should issue to enforce the mandate of the National Environmental Policy Act.

In the wake of the most publicized nuclear accident of our time, the people of the Three Mile Island area—and the people of the nation as a whole—are entitled to the protections Congress provided in the National Environmental Policy Act. The government must not proceed to make decisions that might have a momentous effect on the psychological health and community well-being of its citizens without first giving careful, responsible consideration to the consequences its actions might have. By enacting NEPA Congress meant to assure that no federal decision—especially one of this importance—would be made in the shadow of environmental ignorance.

III. Conclusion

We have concluded that psychological health is cognizable under NEPA and that the Commission's statutory responsibilities over licensed nuclear facilities create a continuing obligation to comply with the requirements of the statute. We therefore remand the record in this case to the Commission for study of potential psychological health effects and for a decision whether a supplemental EIS is necessary.

So ordered.

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

SEPTEMBER TERM, 1981

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY, PETITIONER

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND UNITED STATES OF AMERICA, RESPONDENTS

METROPOLITAN EDISON COMPANY *et al.* (PUBLIC UTILITIES), INTERVENORS

Petition for Review of an Order of the United States Nuclear Regulatory Commission

Before WRIGHT, *Circuit Judge*, MCGOWAN, *Senior Circuit Judge*, and WILKEY, *Circuit Judge*.

AMENDED JUDGMENT

This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory Commission and was briefed and argued by counsel. A judgment was issued on January 7, 1982, Judge Wilkey dissenting. In light of changed circumstances and further consideration, this court has decided to modify its order to the Commission. On consideration thereof,

It is ORDERED and ADJUDGED by this court that, for the reasons stated in the opinion for the court issued this day, the record in this case is remanded to the Commission for a determination whether, since the prep-

aration of the original environmental impact statement for the nuclear facility at Three Mile Island Unit 1 (TMI-1), significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. The Commission may choose the procedures by which it makes this determination. If the Commission finds that such significant circumstances or information exist, it shall prepare a supplemental environmental impact statement which considers not only effects on psychological health but also effects on the well-being of the communities surrounding Three Mile Island.

It is FURTHER ORDERED and ADJUDGED by this court that, in light of the current operating difficulties at TMI-1, it is no longer necessary to preserve the status quo to enjoin the Commission from deciding to restart TMI-1 until it has complied with the requirements of the National Environmental Policy Act (NEPA). The injunction granted on January 7, 1982 is hereby vacated. If subsequently the Commission intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA, it shall provide the court and the petitioner with 30 days' notice thereof.

Per Curiam
For the Court

George A. Fisher
Clerk

Circuit Judge Wilkey dissents for the reasons stated in his dissenting opinion filed this day.

WILKEY, *Circuit Judge*: This opinion has two distinct parts. Part I is my dissent from my two colleagues' decision on the applicability of the National Environmental Policy Act (NEPA)[1] to this case.[2] Part II has been joined by Judge McGowan, and represents the opinion of the court on the applicability of the Atomic Energy Act (AEA)[3] to this case. The net result is that the court holds that NEPA requires consideration of alleged psychological health effects, while the AEA does not.

This may have the appearance of a split decision, but the reality is otherwise. The critical issue is NEPA, and the court's determination produces an extraordinary result. Judge Wright and Judge McGowan hold that in the proceedings on the restart of Three Mile Island Unit 1 (TMI-1), which was not involved in the accident at Three Mile Island Unit 2 (TMI-2), the Nuclear Regulatory Commission (NRC) must consider "the potential psychological health effects of renewed operation of TMI-1."[4] This requires consideration of an "impact" on health—psychological stress—which has never before been held cognizable under NEPA. A similar decision under the AEA would have compounded the problem, but the NEPA decision today suffices to give petitioner People Against Nuclear Energy (PANE) essentially what it has sought: a court-imposed paralysis of nuclear power at Three Mile Island, and potentially elsewhere as well. Thus although I am pleased that my view on the

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[1] 42 U.S.C. §§ 4321-4369 (1976 & Supp. III 1979).

[2] Contrary to Judge Wright's assertion, *see* majority opinion (maj. op.) at 8 n.4, this dissent focuses on the opinion and judgment issued today. Had I been required to deal comprehensively with the mistakes in the January judgment which the majority has corrected, this dissent would have been longer and dealt with more issues.

[3] 42 U.S.C. §§ 2011-2296 (1976 & Supp. III 1979).

[4] Maj. op. at 3.

AEA issue has prevailed, I have no illusion that I am anything other than the chief dissenter in this case.

It is worth noting, and perhaps taking solace in, the majority's[5] partial retreat from the judgment it so hastily issued on 7 January 1982.[6] The injunction

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[5] All further uses in this opinion of "the majority" refer to Judge Wright and Judge McGowan, who constitute the majority of the court on the NEPA issue.

[6] The majority's 7 January 1982 Judgment, from which I dissented, declared:

> This cause came on to be heard on a petition for review of an order of the United States [Nuclear] Regulatory Commission and was briefed and argued by counsel.
>
> On consideration thereof, it is ORDERED and ADJUDGED by this court that the order of the Nuclear Regulatory Commission under review in this cause is hereby vacated.
>
> It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare an environmental assessment regarding the effects of the proposed restart of the nuclear facility at Three Mile Island Unit One (TMI-1) on the psychological health of neighboring residents and on the well-being of the surrounding communities. The Commission shall then determine, on the basis of this environmental assessment, whether the National Environmental Policy Act requires preparation of a full environmental impact statement.
>
> It is FURTHER ORDERED and ADJUDGED by this court that, until the Commission has complied with the requirements of the National Environmental Policy Act as described in the preceding paragraph, it shall not make a decision to restart TMI-1.
>
> It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.
>
> Opinions to follow.

On 2 April 1982 the majority issued an Amended Judgment, from which I also dissented, which contained the alterations announced in today's opinions:

> This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory

against TMI-1's restart has been lifted,[7] and, in addi-

Commission and was briefed and argued by counsel. A judgment was issued on January 7, 1982, Judge Wilkey dissenting. In light of changed circumstances and further consideration, this court has decided to modify its order to the Commission. On consideration thereof,

It is ORDERED and ADJUDGED by this court that this case is remanded to the Commission for a determination whether, since the preparation of the original environmental impact statement for the nuclear facility at Three Mile Island, Unit 1 (TMI-1), significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. The Commission may choose the procedures by which it makes this determination. If the Commission finds that such significant circumstances or information exist, it shall prepare a supplemental environmental impact statement which considers not only effects on psychological health but also effects on the well-being of the communities surrounding Three Mile Island.

It is FURTHER ORDERED and ADJUDGED by this court that, in light of the current operating difficulties at TMI-1, it is no longer necessary in order to preserve the status quo to enjoin the Commission from deciding to restart TMI-1 until it has complied with the requirements of the National Environmental Policy Act (NEPA). The injunction granted on January 7, 1982 is hereby vacated. If subsequently the Commission intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA, it shall provide the court and the petitioner with thirty days' notice thereof.

Opinions to follow.

[7] The reason for lifting the injunction is that technical problems at the plant will delay restart regardless of this court's decision. *See* maj. op. at 27-28. The majority indicates that it stands ready to consider reinstating the injunction if the plant is ready to open prior to the NRC's decision on the need for a supplemental environmental impact statement (EIS). As argued below, the majority's earlier injunction was based on faulty analysis and an erroneous legal standard. *See* pp. 24-26 *infra*.

tion, the majority has corrected two clear errors of NEPA law contained in its original judgment.[8]

Unfortunately, the basic error remains. The extension of NEPA to encompass psychological stress is unwarranted, unprecedented, and inconsistent with relevant decisions in this and other circuits. This novel hurdle, well designed to delay the development of nuclear power (contrary to the national policy determined by Congress and the Executive), is thoroughly consistent with this court's track record of using NEPA to delay the development of important energy sources.[9] I dissent.

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[8] The two errors were ordering an environmental assessment (discussed at pp. 21-22 *infra*) and ordering consideration of the socioeconomic effects on surrounding communities (discussed at pp. 22-23 *infra*).

In my view the majority also erred in ordering the Commission to prepare a statement explaining its reasons for finding that the AEA does not require consideration of psychological stress. There simply is no requirement that an agency provide *any* explanation for its interpretation of its governing statute. If an agency does provide an explanation, a reviewing court must defer to it so long as it is reasonable. *FEC* v. *Democratic Senatorial Campaign Comm.*, 102 S. Ct. 38, 46 (1981). The Supreme Court has noted that "the thoroughness, validity and consistency of an agency's reasoning are factors that bear upon the amount of deference to be given an agency's ruling," *id.* at 44, so that an unexplained or poorly reasoned interpretation is entitled to little deference. *See, e.g., Adamo Wrecking Co.* v. *United States*, 434 U.S. 275, 287 n.5 (1978). Nothing in these decisions, however, requires a particular kind of explanation or authorizes an appellate court to demand a better one.

Since the NRC has complied with the 7 January judgment and produced a majority opinion on the AEA issue, this new statement forms the basis for the court's disposition on this issue. *See* pp. 29-37 *infra*.

[9] The most recent example is *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, No. 74-1586 (D.C. Cir. 27 Apr. 1982), which invalidated a key NRC rule used in nuclear licensing. The combined effect of that decision and the one today is, as I stated in dissent,

I. National Environmental Policy Act

A. *Cognizability of Psychological Stress Under NEPA* [10]

1. *Meaning of "health" in NEPA*

There is no question that NEPA's requirements extend to effects on human health. Two of the Act's goals are to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings," [11] and to "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences." [12] What is in question, of course, is what Congress intended by its inclusion of health as a concern. Amazingly, the majority does not find this even to be a hard question. It holds "that, in the context of NEPA,

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"that this court has effectively taken over control of the nuclear industry. This is not the way I read either the substantive law or a judicial commission." *Id.*, slip op. at 65 (Wilkey, J., dissenting).

[10] The majority also finds that "the social and economic impacts that perceived nuclear hazards might create in the communities in the vicinity of Three Mile Island," maj. op. at 10, constitute "cognizable 'secondary impact[s]' under NEPA." *Id.* at 18. This means that these socioeconomic effects are *insufficient to require preparation of an EIS*, but must be taken into account if an EIS is otherwise mandated. *See* 40 C.F.R. § 1508.14 (1981); maj. op. at 17-18 & n.11 (citing cases).

This holding is irrelevant and unnecessary in this case. Since no new or supplemental EIS has been prepared or ordered, the majority has no occasion to instruct the NRC as to what an EIS should contain if one is prepared. At least, however, the majority has recognized that its 7 January judgment erred in ordering the Commission to consider these socioeconomic effects as part of the threshold determination of the need for a supplemental EIS. *See* pp. 22-23 *infra*.

[11] 42 U.S.C. § 4331(b)(2) (1976).

[12] *Id.* § 4331(b)(3).

health encompasses psychological health," [13] a conclusion that rests on "the simple fact that effects on psychological health are effects on the health of human beings." [14] Since petitioner PANE alleges that the restart of TMI-1 would cause "severe psychological distress" to nearby residents, the majority orders the NRC to consider this allegation under NEPA. This holding is entirely novel, and indeed is contrary to the most closely analogous precedents. In my view it extends the reach of NEPA far beyond its intended scope.

Judge Wright's opinion cites several cases holding that agencies must prepare an EIS when there is a potential effect on human health. What the opinion does not acknowledge is that in each of these cases the effect on health was caused by the federal action itself, *not* by individuals' *fears* of the federal action. Use of toxic herbicides has a potential for damaging human health, and consideration must therefore be given to these potential effects.[15] An allegedly inadequate water run-off system may lead to flooding which endangers human health, so this possibility must be considered.[16]

In the same way, operation of a nuclear power plant may cause harm to human health—for example, due to the potential for exposure to radiation—and the NRC must therefore prepare an EIS and consider these potential harms before licensing the plant. In this case, however, the NRC already has prepared a full EIS on TMI-1,

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[13] Maj. op. at 13.

[14] *Id.* at 11-12.

[15] *See National Organization for Reform of Marijuana Laws* v. *United States Dep't of State*, 452 F. Supp. 1226, 1232 (D.D.C. 1978); *Citizens Against Toxic Sprays, Inc.* v. *Bergland*, 428 F. Supp. 908, 927 (D. Or. 1977).

[16] *See Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Serv.*, 487 F.2d 1029, 1039 (D.C. Cir. 1973).

as well as an environmental appraisal relating to restart, to facilitate decisionmaking and minimize the damage that could result from the plant's operation. This undertaking is what NEPA clearly contemplates.

PANE's contention, however, is not that operation of TMI-1 will affect human health because of the dangers inherent in operation of a nuclear facility, but that individuals' *fears* of an accident at the plant, combined with their lack of confidence in the NRC, will lead to an extension of the psychological stress allegedly caused by the TMI-2 accident. It is patently obvious that this alleged effect is *entirely different* from those health effects at issue in any NEPA case relied on by the majority. Instead of being required to assess *the risk* of a proposed activity in determining whether the activity should go forward, the agency is now required to assess *how people perceive and react to the risk.* PANE's primary purpose is to force the agency to determine whether people so fear renewed operation of TMI-1 that it should not go forward, even if the agency's assessment of the actual risk indicates that the impact on health will not be significant.

This takes NEPA far beyond its intended purpose.[17] *The environmental effects of a federal activity are now to include the views of the population itself on the very*

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[17] Petitioner notes that a Senate Report on NEPA expressed concern about "crowding, congestion, and conditions within our central cities which result in civil unrest and detract from man's social and psychological well-being," S. REP. No. 296, 91st Cong., 1st Sess. 4 (1969), and argues that this shows "particular concern with man's social and psychological well-being." Brief for Petitioner at 42. Yet this passage emphasizes only that the underlying causes of social and psychological unrest—"crowding, congestion, and conditions within our central cities"—should be addressed. Indeed, it is noteworthy that the passage relied on by PANE is specifically relevant to the many cases where local groups raised their fears about effects of a federal project on

desirability of the activity, as expressed through the alleged psychological distress people may suffer if the activity goes forward—no matter how scientifically ignorant and divorced from reality those views (fears) may be. In my view this is a judgment for Congress, and one which has already been made in the case of nuclear power. "Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy . . . ." [18] To adopt the majority view would be to let any special interest group effectively repeal an act of Congress if it could whip up sufficient hysteria.

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neighborhood character, property values, and the crime rate. Yet the courts uniformly have rejected the claim that NEPA requires consideration of social and psychological concerns *about* city conditions; only the conditions themselves are to be considered. *See* p. 9 & notes 19-21 *infra*.

It is true that the specific meaning of "health" in NEPA is less clear than that of "health" in the AEA. The latter was specifically aimed at preventing harm from exposure to radiation, and thus psychological harm from individual fears of nuclear power was obviously not included. Since NEPA was addressed to all agencies and a variety of health problems, the precise meaning of "health"—including whether it encompasses psychological harm—is less readily apparent. *See* note 81 *infra* (opinion for the court on the AEA issue).

That the AEA more obviously excludes psychological health effects does not, however, compel the conclusion that NEPA does encompass them. In my view it is clear that, for the reasons stated in the text above, NEPA was not intended to require agencies to engage in speculative inquiries as to how individuals may react psychologically to a particular activity. I would note also that if Judge McGowan's position—that NEPA, but not the AEA, requires consideration of psychological effects—is based on the broader coverage of NEPA, then he must concede what Judge Wright's opinion specifically tries to deny: that today's majority rationale must apply to the psychological effects of *all* actions of *all* agencies, which is broad coverage indeed.

[18] *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 557-58 (1978).

2. *Case law on psychological factors under NEPA*

Many federal courts have agreed that individuals' psychological reactions to a federal action are not properly considered under NEPA. For example, the Second Circuit has declared: "It is doubtful whether psychological and sociological effects upon neighbors constitute the type of factors that may be considered in making such a determination since they do not lend themselves to measurement." [19] Similarly, the Seventh Circuit has stated: "To the extent that this claim can be construed to mean that HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA." [20] Many other courts have agreed,[21] and these

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[19] *Hanly* v. *Kleindienst*, 471 F.2d 823, 833 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

[20] *Nucleus of Chicago Homeowners Ass'n* v. *Lynn*, 524 F.2d 225, 231 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976).

[21] *See, e.g., Como-Falcon Community Coalition, Inc.* v. *United States Dep't of Labor*, 609 F.2d 342, 345-46 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980); *Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Serv.*, 487 F.2d 1029, 1037 (D.C. Cir. 1973) (fear of "an influx of low-income workers into the County" is an effect that "cannot fairly be projected as having been within the contemplation of Congress"); *First Nat'l Bank* v. *Richardson*, 484 F.2d 1369, 1380 n.13 (7th Cir. 1973) ("As regards public 'sensibilities' aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized."); *Monarch Chem. Works, Inc.* v. *Exon*, 466 F. Supp. 639, 657 (D. Neb. 1979) ("NEPA does not require an evaluation of the psychological and sociological effects of a prison on people who live nearby."); *Trinity Episcopal School Corp.* v. *Romney*, 387 F. Supp. 1044, 1078-79 (S.D. N.Y. 1974) ("[C]ommunity attitudes and fears, or the propensity of certain economic or racial groups to commit anti-social behavior, do not lend themselves to . . . objective

cases represent a clear consensus against consideration of psychological factors.

The majority tries simply to cite and then dismiss these cases as irrelevant, but their force cannot be ignored. They are based largely on the fact that psychological concerns are simply too far removed from the purpose of NEPA, which is to ensure that an agency considers the environmental effects of a decision, not the reactions of affected individuals to the risk of those environmental effects. They also rest on the inherent difficulties in attempting to measure and incorporate into the environmental analysis the differing psychological states of the affected persons.

The majority blithely dismisses this quantification problem as irrelevant,[22] thus ignoring Judge Leventhal's observation that although measurement difficulties do not necessarily prevent consideration under NEPA, they do "have a bearing on the intention of Congress, and whether it contemplated . . . a requirement of a detailed [EIS]."[23] In this case petitioner makes much of the practice of courts in measuring psychological injury. This is of dubious validity given that the assignment of monetary damages for purposes of liability is different from the measurements involved here.

Far more important, however, is that the issue before the NRC will be not how much damage was caused by the TMI-2 accident, but how much *additional* damage will result from TMI-1's restart. This issue is particularly ephemeral and speculative since it is not subject to

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analysis and are not required in a NEPA study."), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

[22] *See* maj. op. at 14, 16 n.10.

[23] *Maryland-National Capital Park & Planning Comm'n* v. *United States Postal Serv.*, 487 F.2d 1029, 1038 (D.C. Cir. 1973).

measurement at all. Instead, the Commission will be forced to *predict* how every individual in the TMI area will react to the restart. Moreover, to the extent the Commission is supposed to devise techniques to alleviate the stress, it will need to guess at how much benefit will accrue from, say, warning system X as compared to warning system Y.

To attempt to assess the effect of TMI-1's operation on the psychological condition of area residents will, in my view, demonstrate the truth in the Second Circuit's finding that "psychological factors are not readily translatable into concrete measuring rods." [24] I do not believe that Congress intended NEPA to encompass an effect which not only varies from individual to individual, but which is also entirely subjective. All the other federal courts which have considered this issue agree.

The majority obviously recognizes that these NEPA decisions are far more relevant than any others to this case. It attempts to distinguish them, however, by asserting that they deal with "sociologically based community anxieties" and "mere dissatisfactions arising from social opinions, economic concerns, or political disagreements with agency policies," which supposedly are easily distinguishable from the potential "medically-recognized impairment of the psychological health of neighboring residents" of TMI.[25] This purported distinction is destroyed by the majority's own finding that it is a "simple fact that effects on psychological health are effects on the health of human beings." [26] The assertion that mere "anxieties" about nearby matters other than nuclear power are not effects on psychological health is entirely unsupported and, I submit, obviously unsupportable. It is

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[24] *Hanly* v. *Kleindienst*, 471 F.2d 823, 833 n.10 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

[25] Maj. op. at 15, 16.

[26] Id. at 11-12.

a callous assumption indeed to believe that persons living close to a prison or in a high-crime area cannot suffer very real psychological harm from fear of physical violence—and highly illogical, also, since the casualty total from crime is a gruesome, proven fact, while the casualty total from nuclear accidents so far, fortunately, remains at zero.

The majority's decision to ignore these many cases seems based ultimately on nothing more than a *political determination* that fears that federal actions will "change the character of the neighborhood, reduce property values, and increase the dangers of crime" [27] are simply not worthy of consideration. Fears of nuclear power, on the other hand, must be considered, presumably because the majority considers them legitimate. *In each case, however, what we are dealing with are fears and anxieties; if NEPA embraces fears and anxieties in one, it must in all.*

In response, the majority declares that it is not attempting to extend NEPA to "mere anxieties," [28] because this case involves "post-traumatic anxieties, accompanied by physical effects and caused by fears of recurring catastrophe." [29] Yet this very passage frames the harm precisely in terms of anxiety and fear. All that it adds are the alleged physical effects accompanying psychological stress. Why physical effects should be determinative of the outcome the majority does not say. If this is critical, then petitioner surely must fail; the physical harms alleged are, standing alone, rather minor. Moreover, I see no basis, as either a legal or scientific matter, for drawing the majority's distinction. I am confident that psychologists would not accept the view that psychological stress unaccompanied by physical symptoms

[27] *Id.* at 5.

[28] *Id.* at 14.

[29] *Id.* at 16-17.

is therefore medically unrecognizable or necessarily much less severe than stress that does have related physical effects.[30]

Moreover, the majority's emphasis on the notion that "post-traumatic" psychological harm is recognized by the medical profession is unconvincing. Surely "post-traumatic" stress is but one of numerous forms of psychological stress that are "medically recognizable." There is no legal or logical justification for interpreting NEPA's "health" coverage to extend only to such stress as may arise from a traumatic event.[31] The majority seems to rely on PANE's allegation of *severe* psychological stress, as well as its own view that this accident was especially "unique and traumatic."[32] But the fact that post-traumatic stress *may* be more severe than other psychological harms is irrelevant to whether psychological harms are cognizable under NEPA. The severity of an effect is relevant to the "significance" it has under NEPA, and thus to whether an EIS must be prepared.[33]

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[30] I concur in Commissioner Hendrie's analysis:

> Presumably, psychological distress will always be accompanied by physical symptoms in a certain proportion of the persons affected. As a legal matter, I see no basis for differentiating between psychological stress that has physical symptoms and that which is without physical manifestations as a means of deciding whether the Commission's licensing proceedings should adjudicate the nature and degree of such stress.

Metropolitan Edison Co., 12 N.R.C. 607, 617 (1980) (separate views of Commissioner Hendrie).

[31] Presumably, a prison escape in which local citizens were harmed would necessarily constitute a "traumatic event" which would transform local fears from mere anxieties into full-fledged psychological stress that must be considered under NEPA. My suspicion, however, is that the majority would somehow, despite the logic of its opinion, find a way to avoid this result.

[32] Maj. op. at 16.

[33] *See* 40 C.F.R. § 1508.27 (1981).

Before this inquiry need be undertaken, however, there is the preliminary question at issue here: is the alleged effect cognizable *at all* under NEPA as a "primary impact" which may require an EIS? This inquiry does not depend on the intensity of a particular effect.

This point is disputed by the majority: "[T]he severity of a psychological effect is not only relevant to whether an EIS is required under NEPA, . . . but also to the cognizability of the impact under the statute." [34] Why is this so? No answer is given. The majority simply asserts that some psychological effects are worse than others, and therefore the former are cognizable while the latter are not. But this is not true of any other type of health effect, and there is utterly no support in NEPA for this distinction.[35] The majority has simply set itself up as the arbiter of what harms are severe enough to deserve NEPA protection. Thus what constitutes a "real" and "justifiable" fear, as opposed to what constitutes only a "social" or "economic" or "political" fear, will be determined by the courts.

And the choice itself will be totally arbitrary: NEPA protection will depend less on how much psychological harm the individual suffers, than on whether the judges of this court believe the *source* of the psychological harm is acceptable. If one fears living near a prison following a violent escape, NEPA might provide no protection because fear of a public project is merely social; if one fears living near a nuclear power plant following an accident which threatened to cause harm, NEPA will

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[34] Maj. op. at 17.

[35] For example, no court has suggested that socioeconomic effects may change from secondary impacts into primary impacts if the severity of the effects seems especially severe. Even where an effect of considerable severity was alleged—for example, the loss of 1200 local jobs at a military base—NEPA was not found applicable. *See Image of Greater San Antonio* v. *Brown*, 570 F.2d 517, 522-23 (5th Cir. 1978).

provide protection because, as we all know, nuclear power is potentially dangerous and we should all fear it.

3. *Implications of the majority's reasoning for nuclear power*

The majority's attempt to base its decision on the singularity of the TMI-2 accident, and thus perhaps to avoid the implications of the logic employed, also fails to explain why all nuclear power *licensing* decisions in the future will not need to include consideration of psychological stress. One key factor the majority sees in distinguishing this case from the "sociological anxiety" cases is that none of those cases involved "the holocaust potential of an errant nuclear reactor." [36] But this rationale obviously applies to all nuclear facilities, and licensing is their sine qua non.

More generally, the court's emphasis on the "major" and "unique and traumatic" nature of the TMI-2 accident does not explain why the type of psychological harm resulting from this accident is cognizable under NEPA while other forms of psychological stress associated with nuclear energy might not be. This accident killed no one and caused no detectable physical harm.[37] Thus the

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[36] Maj. op. at 15. This distinction rests on the unstated premise that a low probability of a high-risk disaster induces greater psychological harm than a high probability of a low-risk disaster. Obviously this is an empirical question, and it seems likely that each individual will have a different reaction. For example, some persons may live near a nuclear reactor without experiencing stress, yet at the same time may be petrified of driving on a crowded freeway. And, of course, the opposite may be true. My colleagues' not-so-subtle attempt to single out nuclear power as particularly likely to cause psychological stress seems based on nothing more than their own personal viewpoints on this issue.

[37] My colleagues describe the accident at TMI-2 as "major," and refer to fears of a *"recurring catastrophe." Id.* at 13, 17 (emphasis added). Others habitually refer to it as a "disaster." This makes one wonder what descriptive phrases will

"unique and traumatic" circumstances must be found elsewhere, perhaps in the fact that the TMI-2 accident "aroused fears of a nuclear core meltdown and led to mass evacuation from the surrounding communities." [38] Both factors might exist, however, even where an accident objectively is not a "major" one at all. Indeed, even in this case it is clear that some of the dangers were greatly exaggerated; most of the evacuation that took place was voluntary rather than officially requested or ordered.[39] To the extent any consistent standard can be

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be employed *if someone actually loses his life* in a nuclear accident.

A comparison of risks outside the nuclear field may be appropriate here. We have had nuclear power for 30 years, and no one has yet lost his life in a nuclear accident. In recent years *the average loss of life in coal mining*, another source of energy, *has been 150 lives per year*. Wash. Post, 28 Jan. 1982, at A24, col. 1. After every coal mining disaster, the mine usually is shut down for safety inspection and repairs. On the majority's reasoning here, will the Department of Labor's Mine Safety and Health Administration be required to go through NEPA procedures after every mine disaster? What is the state of "psychological health" or "community well-being" in Appalachia after a mine accident? Or indeed, at any time?

For those who are more than just theoretically interested in equalizing the burdens, including the burdens of *risk*, in our society, is it not significant that the risks of mining coal (and the psychological stress and trauma in the surrounding communities) are borne by a group of Americans who could hardly be called privileged, while the risks of nuclear power (so far, non-fatal) are borne equally by rich and poor alike?

[38] Maj. op. at 13-14.

[39] *See* REPORT OF THE PRESIDENT'S COMMISSION ON THE ACCIDENT AT THREE MILE ISLAND, THE NEED FOR CHANGE: THE LEGACY OF TMI 13-19, 118-30 (1979). To the extent the evacuation was critical in making this a "traumatic" event in the majority's eyes, the result may be to encourage NRC officials during future accidents to play down the need for or even delay evacuation—an anomalous and dangerous result indeed.

derived from the majority's analysis, what appears is *a standard which will depend largely on how much fear is worked up, from whatever source, rather than how serious the danger actually is.*[40]

In any event, the majority fails even to try to explain why fears resulting from lesser accidents, or simply from the operation of nuclear facilities, do not also engender psychological stress in individuals. The susceptibility of individuals to psychological stress may vary widely. There may be a considerable number of persons who suffered more stress from having read about TMI-2's accident than some persons who were in the area at the time. A traumatic event is not a prerequisite to experiencing psychological health problems. And what constitutes a "traumatic" event may differ greatly among individuals. The mere sound of a warning siren at a nuclear plant may cause a great deal of stress to certain individuals, yet the majority apparently would find such stress not cognizable under NEPA because a warning siren is not, in the majority's view, sufficiently "unique or traumatic."

Most fundamentally, the majority never explains why the prerequisite to NEPA consideration of psychological harm is *the existence of some level of stress caused by a nuclear accident.* This is true of no other effect under

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[40] As Commissioner Hendrie noted, "the actual level of risk is essentially irrelevant to the psychological stress claimed to be suffered." *Metropolitan Edison Co.*, 12 N.R.C. 607, 612 (1980) (separate views of Commissioner Hendrie). Accordingly, "there would seem no obvious basis for differentiating between rationally and irrationally grounded anxieties." *Id.* at 617. I find it hard to believe that Congress intended NEPA to force agencies to consider psychological reactions to risks apart from the actual level of the risks themselves. *Cf. Trinity Episcopal School Corp.* v. *Romney*, 387 F. Supp. 1044, 1079 (S.D.N.Y. 1974) ("though fears may contribute to neighborhood instability, they may be irrelevant to actual facts"), *rev'd and remanded in part on other grounds*, 523 F.2d 88 (2d Cir. 1975).

NEPA. Consideration of the potential for harm from exposure to radiation is not postponed until actual exposure takes place; it is the *potential harm* that is to be considered. If, as PANE alleges, the TMI-2 accident caused severe psychological harm, then any nuclear facility has the *potential* for "causing" such harm. NEPA consideration therefore should be mandatory in *all* licensing decisions, if psychological stress is cognizable at all.

This is the result the majority opinion's rationale inexorably demands. If it is a "simple fact that effects on psychological health are effects on the health of human beings," [41] and if such effects are cognizable under NEPA, there is no reason why *only* "post-traumatic" forms of psychological stress must be considered. This logic is obvious enough to opponents of nuclear power that they have responded to this court's 7 January judgment by filing psychological stress contentions in *ordinary NRC licensing and construction permit proceedings.*[42] The breadth of the extension of NEPA that acceptance of these contentions would entail is what obviously leads the majority to take refuge in the "unique and traumatic" nature of the TMI-2 accident and, allegedly, its psychological aftermath. In the end, this attempted limitation is compelling evidence of the majority's own doubts about the validity of its analysis and own realization of how far NEPA is being stretched in order to support today's result.

B. *Need for a Supplemental EIS*

Regulations promulgated by the Council on Environmental Quality (CEQ) require preparation of a supplemental EIS when, inter alia, "[t]here are significant

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[41] Maj. op. at 11-12.

[42] See pp. 27-29 *infra*. Although it is not clear whether these allegations were raised under NEPA or the AEA or both, after today's decision there will be no doubt that all such challenges will henceforth be framed under NEPA.

new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." [43] A prerequisite to application of this provision, obviously, is the existence of a "proposed action." Taking the broadest conceivable view of this issue, the majority concludes that "the 'continuing activity' of regulating TMI-1 is federal action within the scope of NEPA." [44] This means that the fact that in this case the NRC is proposing to restart the plant is irrelevant. The majority concedes as much, stating that PANE's claim that NEPA must be followed "does not depend on the happenstance that TMI-1 was shut down for refueling at the time of the accident." [45]

This is a holding of considerable breadth. Preparation of an EIS or a supplemental EIS is required only for proposed *actions*. Yet under the majority's interpretation, the NRC is engaged in such "action" every second of every day. It thus will be possible for NEPA to apply even when a nuclear plant is operating pursuant to an NRC license and the NRC proposes to take no action to upset this status quo.

The majority defends its interpretation by pointing to cases which have held that continuing federal involvement in a project meant that NEPA remained applicable, and also to the CEQ definition of "federal action" as "new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies." [46] The majority overlooks, however, the fact that each case it relies on involved a "proposed action": projects had been approved but were as yet not undertaken or were incom-

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[43] 40 C.F.R. § 1502.9(c)(1)(ii) (1981).

[44] Maj. op. at 20.

[45] *Id.* at 18-19.

[46] 40 C.F.R. § 1508.18(a) (1981); *see* maj. op. at 21-24 (citing cases).

plete.[47] Although in this case the "happenstance" of TMI-1 being shut down does put the Commission in the position of proposing an "action" (restart), the majority's holding may significantly increase the NEPA burden on all regulatory agencies in the future.[48]

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[47] *See Warm Springs Dam Task Force* v. *Gribble*, 621 F.2d 1017 (9th Cir. 1980) (dam not yet constructed); *WATCH (Waterbury Action to Conserve Our Heritage Inc.)* v. *Harris*, 603 F.2d 310 (2d Cir.) (building demolition not yet carried out), *cert. denied*, 444 U.S. 995 (1979); *Society for Animal Rights, Inc.* v. *Schlesinger*, 512 F.2d 915 (D.C. Cir. 1975) (destruction of birds not yet carried out); *Jones* v. *Lynn*, 477 F.2d 885 (1st Cir. 1973) (urban renewal project not yet completed); *Libby Rod & Gun Club* v. *Poteat*, 457 F. Supp. 1177 (D. Mont. 1978) (dam not yet constructed), *rev'd in part and aff'd in part*, 594 F.2d 742 (9th Cir. 1979); *Nelson* v. *Butz*, 377 F. Supp. 819 (D. Minn. 1974) (dam not yet constructed).

In one other case cited by the majority, the Ninth Circuit reversed a district court holding that the Navy was required to file an EIS annually with each request for appropriations to finance practice bombing of an uninhabited island. *Aluli* v. *Brown*, 437 F. Supp. 602 (D. Hawaii 1977), *rev'd in part*, 602 F.2d 876 (9th Cir. 1979). The Navy had conceded that it should revise its existing EIS due to the discovery of archaeological sites within the target area, but argued that it should wait until it finished an archaeological survey. The precise basis for the need for a supplemental EIS was never made clear, though the court clearly viewed the bombing practice as a series of discrete activities.

[48] Indeed, the combination of the supplemental EIS requirement and the majority's holding here may inhibit agencies ever from making final decisions. Yet the Supreme Court has recently reiterated that agencies may not be forced constantly to grant rehearings simply because new information is available:

> "Administrative consideration of evidence . . . always creates a gap between the time the record is closed and the time the administrative decision is promulgated [and, we might add, the time the decision is judicially reviewed] . . . . If upon the coming down of the order litigants might demand rehearings as a matter of law

In its 7 January judgment, the majority compounded this unnecessarily broad construction of the supplemental EIS requirement by ordering the NRC to conduct an "environmental assessment" and by ordering that the assessment extend to the socioeconomic effects alleged by PANE.[49] Both of these orders were clearly wrong. The majority has not expressly repudiated those portions of the original judgment, but its 2 April amended judgment and its opinion today indicate otherwise. To eliminate any possible uncertainty on the part of the agency, I will briefly discuss these two points.

An environmental assessment is a procedure required by CEQ regulations to be used when an agency must decide whether to prepare an EIS.[50] This requirement does not extend to supplemental EIS's. The majority's first judgment required the NRC to conduct an environmental assessment in this case. Today's opinion, however, leaves this procedural question to the agency: "We remand the record in this case to the Commission to determine what procedures NEPA requires in light of its evaluation of new information about psychological health effects."[51] In other words, the NRC is required to determine whether a supplemental EIS is required, but it is not required to make that determination on the basis of any specific procedure.

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because some new circumstance has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening." *ICC* v. *Jersey City*, 322 U.S. 503, 514 (1944).

Vermont Yankee Nuclear Power Corp. v. *Natural Resources Defense Council, Inc.*, 435 U.S. 519, 554-55 (1978).

[49] *See* 7 January judgment, *reprinted in* note 6 *supra*.

[50] 40 C.F.R. § 1508.9 (1981).

[51] Maj. op. at 19 n.12. *See also* amended judgment, *reprinted in* note 6 *supra*.

This obviously is the correct result. The Supreme Court's decision in *Vermont Yankee Nuclear Power Corp.* v. *Natural Resources Defense Council, Inc.*[52] makes clear that courts may not impose new procedural requirements on agencies. Moreover, there is no necessary reason why an agency must conduct a formal environmental assessment every time any person alleges that new and significant information requires preparation of a supplemental EIS. This determination may well be different from the determination whether an EIS was required originally, the determination that an environmental assessment is designed to facilitate.[53] Thus, while the agency retains the power to order an environmental assessment if it wants to,[54] neither NEPA nor the CEQ regulations require adherence to this procedure.

The court's 7 January judgment also ordered the NRC to include in the environmental assessment consideration of the socioeconomic effects alleged by petitioner. Today, however, the court withdraws that requirement: "If NEPA requires the Commission to prepare a supplemental EIS regarding the TMI-1 restart decision because the agency makes a threshold finding of significant new information on psychological effects, . . . PANE's contentions regarding secondary effects on the community

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[52] 435 U.S. 519, 539-49 (1978).

[53] For example, an environmental assessment must include a discussion of both the need for a proposal and alternatives to the proposal. 40 C.F.R. § 1508.9(b) (1981). In the context of this case, where the need for TMI-1 has already been determined and alternatives to TMI-1 have already been considered in the original EIS, such requirements make little sense. These earlier agency determinations have not been called into question by petitioner's new allegations. To hold otherwise would effectively turn the requirement to supplement an EIS into a requirement to prepare an entirely new EIS. This is not the purpose of a supplemental EIS, and in determining the need for one the agency should be able to use whatever procedures it finds appropriate.

[54] *Id.* § 1501.3(b).

must be evaluated in the supplemental EIS."[55] This means that the NRC is not required to hear any evidence or make any findings on the alleged effects of restart on community well-being, *unless* it determines that the psychological health effects of restart are significant enough to warrant preparation of a supplemental EIS.

The majority is correct in drawing back from the requirement in its original judgment. Socioeconomic effects are, as the majority itself has found,[56] only secondary effects which therefore do not themselves require preparation of an EIS. PANE has argued that secondary effects can necessitate a supplemental EIS,[57] but this would lead to the absurd result of a continuing agency requirement to supplement its EIS with consideration of effects that were not significant enough to require preparation of an EIS in the first place. Nothing in NEPA or the CEQ regulations supports such a scheme, whereby a supplemental EIS is more easily triggered than an original EIS, and the majority has rightly rejected it.

C. *The Injunction Against Restart of TMI-1*

On 7 January the majority enjoined restart of TMI-1 until the NRC had completed an enivronmental assessment. This injunction has now been lifted, but only due to independent problems that will delay reopening of the plant. Since the majority has not given any indication that it will hesitate to reimpose the injunction if restart appears possible before completion of the NEPA proceedings, it is worth discussing the problems with the majority's original injunction.

Perhaps the majority found it obvious that restart could not be permitted prior to completion of the NRC's

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[55] Maj. op. at 18. *See also* amended judgment, *reprinted in* note 6 *supra*.

[56] Maj. op. at 17.

[57] *See* Brief for Petitioner at 51, 58.

NEPA inquiry. It must be remembered, however, that *the majority itself disclaims reliance* on the happenstance that TMI-1 was shut down at the time of the accident. Since a restart decision is normally quite routine, the majority's decision to issue the injunction suggests that it would have felt equally compelled to *shut down* TMI-1, pending the determination on whether to prepare a supplemental EIS, had it been in operation and had the NRC determined not to shut it down.

Viewed in this light, the propriety of issuing an injunction was much in doubt. There is no absolute principle that requires enjoining agency action pending compliance with NEPA. Rather, the court should weigh the equities to determine where the public interest lies:

> [W]hile there is, in cases of NEPA noncompliance, a "presumption" in favor of injunctive relief, such relief does not follow automatically from every finding of a violation of NEPA. . . . What is called for, in each case, is a "particularized analysis" of the violations that have occurred, of the possibilities for relief, and of any countervailing considerations of public interest.[58]

In my view there are several considerations that militated against an injunction in this case. First, it is extremely unlikely that any consideration of psychological stress will result in a permanent closing of TMI-1.[59]

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[58] *Alaska* v. *Andrus*, 580 F.2d 465, 485 (D.C. Cir.) (Bazelon, J.) (footnote omitted), *vacated in part on other grounds sub nom. Western Oil & Gas Ass'n* v. *Alaska*, 439 U.S. 922 (1978).

[59] Although courts normally should not prejudge whether consideration of environmental factors will affect the agency's decision, *see Realty Income Trust* v. *Eckerd*, 564 F.2d 447, 456-57 (D.C. Cir. 1977), in this case there is ample evidence from the NRC itself that consideration of psychological stress allegations will not lead to the closing of TMI-1. Commissioner Bradford, who exhibited the most sympathy for PANE's allegations, conceded that "it will be hard to

Consideration of measures designed to help reassure the public of the plant's safety, even if required, could be undertaken while the plant was readied for restart. (Again, it must be remembered that the majority's reasoning would apply *even if the plant were operating;* surely it would not make a mockery of the NEPA process were a court to order consideration of certain factors without ordering a shutdown of the plant.) Second, there have been substantial rate increases for the people in the TMI area, both to pay the cost of the TMI-2 cleanup and to cover the costs of obtaining electricity elsewhere. This burden will be prolonged and perhaps increased if TMI-1 remains closed indefinitely. The court should have evaluated these costs.[60]

Third, and most important, the question before the Commission in January was whether to approve *a restart limited to five percent of the plant's power level.* This low-power start was proposed *unanimously* by the Licensing Board, and "would facilitate testing of many nuclear safety devices and systems but would essentially eliminate the possibility of an accident having serious consequences for the public health and safety."[61] Such a

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avoid the conclusion that stress and its consequences are not of such overriding importance to the populace as a whole as to preclude operation of the plant." *Metropolitan Edison Co.*, 12 N.R.C. 607, 621 (1980) (dissenting views of Commissioner Bradford). The court should have taken notice of this fact in balancing the equities to determine whether to issue an injunction halting the restart; no member of the Commission would have done so.

[60] "The decision whether halting a project pending reevaluation of environmental factors warrants the social and economic costs of delay rests in the sound discretion of the court." *Natural Resources Defense Council, Inc.* v. *United States Nuclear Regulatory Comm'n*, 606 F.2d 1261, 1272 (D.C. Cir. 1979).

[61] *Metropolitan Edison Co.*, Partial Initial Decision, Docket No. 50-289-SP (Restart), at 803 (Atomic Safety and Licensing Board 14 Dec. 1981). The reason for postponing a

short-term, low-power start would assuredly have much less impact on area residents' psychological health than allegedly would a full restart for resumption of normal operations. The majority certainly should have considered this, and might well have ordered only that the Commission postpone decision on a *full* restart until completion of the environmental assessment.

By refusing even to consider these obviously relevant factors, the majority suggests that any time a court decides merely that a supplemental EIS *may* be needed, it necessarily must order that the nuclear plant, or other federal activity, be shut down until the agency has considered the environmental issues. NEPA was not intended to result in such a major interference in already approved and already operating facilities. Since I do not find any violation of NEPA in this case, I had no occasion to balance the equities in determining the need for an injunction. This the majority was required to do. The arguments against the injunction were strong, and the majority's failure to address them was erroneous under any judicial review standard.

D. *Summary*

The fundamental error in the majority's reasoning is its conclusion that allegations of psychological stress, caused by fear of a second nuclear accident, are cognizable under NEPA. The majority's attempt to limit this holding to the "unique and traumatic" TMI situation has no basis in NEPA law. The majority seems to *hope* that psychological stress allegations will rarely be raised, so that the logically necessary extension of today's holding to any kind of psychological harm, whether "post-traumatic" or not, will be avoided.

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full restart was that the Board had not yet completed an inquiry into allegations of cheating by two TMI-1 supervisors on an NRC examination.

On the basis of all experience, however, one may well doubt whether opponents of nuclear power or other federal activities will so cooperate. Indeed, it appears that this court's 7 January judgment has already been taken as indicating that psychological stress allegations will be fair game in *any* nuclear power proceeding. Despite PANE's and the majority's protestations that a prior nuclear accident is critical to the validity of stress allegations, antinuclear groups have recently filed such allegations in *four licensing and permit proceedings*:

> For example, in the Shearon Harris operating license proceeding, three petitions to intervene were filed on February 17, 1982; all three seeking to raise psychological distress issues. *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), NRC Docket Nos. 50-400, 50-401. In particular, a group known as the Environmental Law Project of the University of North Carolina sought to intervene, claiming that operation of the plant would undermine its members' "psychological well-being"; that its members "must study long and hard to prepare for their classes"; and that "the psychological stress of an operating plant in such close proximity will detract from their studies." Daniel F. Read also sought to intervene, stating that he would like to contest "the psychological stress factor." Similarly, a group called Chapel Hill Anti-Nuclear Effort claims that the plant would "undermine the psychological well-being of petitioner's members."
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> In the Black Fox construction permit proceeding, the intervenors on February 1, 1982, submitted a contention claiming that the safety evaluation of the plant was deficient because it "did not include the effects of psychological stress on the people within the 10 and 50 mile emergency planning zones." *Public Service Company of Oklahoma* (Black Fox Units 1 and 2), NRC Docket Nos. 50-556, 50-557 (*see* Exhibit B).

In the Zimmer operating license proceeding, after the hearing had been completed, the intervenor indicated that it would attempt to renew a previously rejected psychological stress contention after the Court has issued its opinions in this case. *Cincinnati Gas & Electric Co.* (William H. Zimmer Nuclear Power Station, Unit 1), NRC Docket No. 50-358, Transcript of Hearing, March 4, 1982, at 7933-36 (*see* Exhibit C).

Finally, there is currently in progress a special NRC proceeding to determine whether the operating licenses for the Indian Point nuclear plants should be revoked. *Consolidated Edison Company of New York* (Indian Point Unit 2), NRC Docket No. 50-247-SP; *Power Authority of the State of New York* (Indian Point Unit 3), NRC Docket No. 50-286-SP. On December 8, 1981, a group called Parents Concerned About Indian Point filed proposed contentions in that proceeding, one of which (Contention IV) alleges that "[t]he physical and psychological environment of children will be improved by permanently shutting down the Indian Point Nuclear Power Station." (*See* Exhibit D). The basis for this contention was explained in part as follows:

> Parents, teachers, doctors, and other caretakers of children feel anxiety because of the continued operation of Indian Point. These anxieties are communicated to children and would be significantly reduced by cold shut down of Units 2 and 3.

On April 9, 1982, the Indian Point Licensing Board issued a Memorandum and Order admitting the contention into the proceeding. (*see* Exhibit E, at 14). In a footnote, the Licensing Board made the following reference to this case:

> The litigation of psychological aspects of this contention will be held in abeyance pending issuance of an opinion by the court in PANE v NRC, Docket No. 81-1131, D.C. [Circuit] Court

> of Appeals, and any NRC policies or regulations issued as a result of that decision. We are also holding in abeyance action on the Power Authority's Motion to Exclude Fear of Nuclear Power as an Issue in this Proceeding dated December 1, 1981.[62]

This makes clear that today's decision will not be deemed limited or sui generis, but rather as inviting protests based on psychological stress to be raised in all nuclear proceedings. And under today's reasoning, such a challenge to an operating plant would require the NRC at least to make a threshold determination whether a supplemental EIS must be prepared to take account of these allegations, and the plant would be shut down by court order pending completion of this determination.

Of course, the majority protests that it is not trying to draw a bright line to govern future situations, and perhaps it might decide these new cases differently. *But in doing so it would necessarily repudiate the logic of its opinion today, and thereby expose this decision for what it is*: a decision that NEPA *must* cover the "psychological aftermath" of the TMI-2 accident, not, in the final analysis, because NEPA's history, purpose, and judicial construction demand it, but because the majority finds this "most publicized nuclear accident of our time" to be a terrible thing indeed.[63]

II. Atomic Energy Act

In December 1980 the Commission voted 2-2 to deny consideration of psychological stress allegations in the TMI-1 restart proceeding. In separate opinions Commissioner (then Chairman) Ahearne and Commissioner Hendrie stated that the AEA did not require considera-

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[62] Intervenor-Respondents' Comments on NRC's Memorandum and Order Concerning the Atomic Energy Act at 4-6 (footnotes omitted).

[63] Maj. op. at 28.

tion of these issues.[64] Commissioner Gilinsky and Commissioner Bradford voted to exercise the NRC's discretion to consider these issues, but did not express a view on whether consideration was mandated.[65] In September 1981 Chairman Palladino was named as the fifth commissioner, and he voted to deny consideration of psychological stress, without stating his reasoning.

On 7 January 1982 this court, Judge Wilkey dissenting, ordered the NRC to "prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.[66] On 30 March 1982 the Commission complied, filing a memorandum and order joined by Chairman Palladino and Commissioners Ahearne and Roberts.[67] Commissioner Gilinsky again stated his view that the NRC should have considered psychological stress issues, and again did not contend that such consideration was mandated by the AEA.[68]

On the basis of the Commission's 30 March opinion, we now uphold its decision.

A. *Standard of Review*

As the Supreme Court has recently reiterated, an agency's interpretation of its governing statute is entitled to substantial deference. "To satisfy this standard it is not necessary for a court to find that the agency's construction was the only reasonable one or even the reading the court would have reached if the question

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[64] *Metropolitan Edison Co.*, 12 N.R.C. 607, 610 (1981) (separate views of Chairman Ahearne); *id.* at 615 (separate views of Commissioner Hendrie).

[65] *Id.* at 619 (separate views of Commissioner Gilinsky); *id.* at 621 (separate views of Commissioner Bradford).

[66] Judgment, *reprinted in* note 6 *supra*.

[67] *Metropolitan Edison Co.*, Docket No. 50-289 (N.R.C. 30 Mar. 1982) (hereinafter "NRC op.").

[68] *Id.* (separate views of Commissioner Gilinsky).

initially had arisen in a judicial proceeding." [69] Our deferential posture is further buttressed by the recognition that Congress' scheme for regulating nuclear energy "is virtually unique in the degree to which broad responsibility is reposed in the administering agency." [70] We conclude that the Commission's interpretation of the AEA is reasonable and completely consistent with the intent underlying the statute, and we accordingly affirm its decision not to consider psychological stress issues under the AEA.

B. *Meaning of "Health and Safety" in the AEA*

The AEA gives the Commission the responsibility to "protect the health and safety of the public." [71] In determining that this mandate does not include the responsibility to consider psychological reactions to nuclear power, the Commission emphasized that "the Atomic Energy Act itself does not discuss psychological health, and the statute, its legislative history, and applicable caselaw all suggest strongly that Congress intended the Commission to exercise its regulatory authority to protect only against the physical risks associated with radioactivity." [72] In addition, the NRC noted that "there are strong policy considerations which argue against the consideration of psychological health effects *per se* in NRC licensing and enforcement proceedings." [73] Both rationales are reasonable and in accord with the AEA.

The Commission relied substantially, and in our view properly, on the First Circuit's decision in *New Hamp-*

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[69] *FEC* v. *Democratic Senatorial Campaign Comm.*, 102 S. Ct. 38, 46 (1981).

[70] *Siegel* v. *Atomic Energy Comm'n*, 400 F.2d 778, 783 (D.C. Cir. 1968).

[71] 42 U.S.C. § 2012(d) (1976); *see id.* § 2133(d).

[72] NRC op. at 2.

[73] *Id.*

shire v. *Atomic Energy Commission*,[74] which represents the primary judicial construction of "health and safety" under the AEA. The court was asked to order the Commission to consider in a licensing proceeding "evidence of possible thermal pollution of the Connecticut River as a result of the discharge of cooling water by [the nuclear] facility." [75] Judge Coffin's opinion for the court noted that Congress had nowhere in the statute provided any more precise definition of "health and safety," and that under the modern usage of the phrase, psychological health would be included. But the court observed that it did not "feel that we fulfill our function responsibly by simply referring to the dictionary." [76] Considering the legislative history in detail, Judge Coffin found clear evidence that a broad construction was not intended:

> Here we feel a very palpable restriction in the history surrounding the problem addressed by the Congress, the subsequent Congressional confirmation of the limited approach taken by the Commission, the contemporary efforts in the Congress to broaden that approach, and a recognition of the complexity of administrative arrangements which would attend a literal definition of public health and safety as these terms are used in the Atomic Energy Act.[77]

The court concluded that Congress "had in mind only the special hazards of radioactivity," [78] and that the Commission's responsibility is "confined to scrutiny of and protection against hazards from radiation." [79]

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[74] 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969).

[75] *Id.* at 171.

[76] *Id.* at 173.

[77] *Id.* at 173-74.

[78] *Id.* at 174.

[79] *Id.* at 175.

Petitioner has failed to demonstrate that this well-reasoned opinion—which, significantly, has now been adopted by the Commission [80]—is an unreasonable or erroneous construction of the Act. Petitioner's primary argument is simply that the "plain meaning" of "health and safety," which arguably includes psychological health, should control. The First Circuit directly considered this suggestion, however, and determined that there were strong indications in the legislative history that this was not the meaning intended by Congress. Both that court and the NRC found that the fundamental conclusion one must reach after considering the legislative history of the 1946 and 1954 acts, along with all the subsequent history of NRC regulation and congressional oversight, is that Congress was concerned about "the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials," [81] and

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[80] *See generally* NRC op. at 4-10.

[81] S. REP. No. 1211, 79th Cong., 2d Sess. 1335 (1946). Petitioner argues that the word "other" in this passage demonstrates that Congress contemplated encompassing all harms not yet known within the meaning of "health." *See* Brief for Petitioner at 31. The context of the list of harms makes clear, however, that Congress was concerned with the physical harms resulting from exposure to radiation, and most certainly not with the psychological harms that may result from being in the vicinity of an operating nuclear facility. As the Commission stated:

> Psychological distress is sufficiently dissimilar to the types of harm enumerated in the statute that it cannot be considered among the 'other harmful or toxic effects', contemplated by Section 12. This is all the more true in view of the total absence of any suggestion in the legislative history or in 35 years of Commission practice and congressional oversight that the Commission was intended to take into account psychological distress alleged to result from its activities.

NRC op. at 13. Thus unlike NEPA, which applies to all agencies and was meant to address a wide variety of potential harms, the AEA was definitely aimed at a particular concern: human exposure to radioactivity. Whatever the

that the Commission was created "in order to bring a maximum of technical expertise to bear on complex and hazardous activities associated with a developing technology." [82] Given this background, limiting "health and safety" to the special hazards of radioactivity is reasonable and, indeed, compelling.

PANE argues, however, that even under the First Circuit's definition psychological stress must be considered. Since there is "a justified public perception of radiation as extremely hazardous," combined with the knowledge that a major accident could contaminate a large area, the psychological stress resulting from the TMI-2 accident and, allegedly, the TMI-1 restart is in fact a "special hazard of radioactivity." [83] We agree with the Commission that this argument is "unpersuasive. Presumably, every hazardous technology gives rise to fears peculiarly associated with it: fear of being inundated by failure of a newly constructed dam, for example, or of being hit by debris from a crashing airplane." [84] Individuals may experience psychological trauma from the occurrence of accidents or disasters such as these, all of which take place with sufficient frequency to claim a substantial number of human lives. It is obvious, therefore, that "post-traumatic psychological stress" can result from any traumatic event, and is not so peculiar to nuclear energy that Congress can be deemed to have considered it a *special* hazard of radioactivity. Rather, the special hazards Congress was concerned with were those associated with human exposure to radiation.

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complexities in determining the applicability of NEPA to psychological harms from nuclear power, therefore, the proper disposition on the AEA issue is clear.

[82] NRC op. at 3 (quoting *Metropolitan Edison Co.*, 12 N.R.C. 607, 613 (1980) (separate views of Commissioner Hendrie)).

[83] Brief for Petitioner at 21-22.

[84] NRC op. at 10.

Moreover, if, as PANE argues, there is an extreme fear of radiation and of a major nuclear accident, then certainly there must be individuals who experience medically-diagnosable stress resulting from the operation of any nuclear facility. Since this undeniably is an effect on psychological health, it would need to be considered in every licensing proceeding. Yet PANE itself recognizes that this is contrary to congressional intent:

> It might well be an absurd result to hold that the Commission is required to take into account, as within Section 103(d), the fears that normally arise in a community when a nuclear reactor is proposed. That type of interpretation could conceivably prohibit nuclear reactors virtually anywhere, which is clearly not the intent of Congress.[85]

This attempt to limit the argument is plainly illogical. If someone alleges harm to his psychological health from the operation of a nuclear plant, and if "health and safety" encompasses psychological harms, why should not the NRC be required at least to consider this allegation in its licensing decision? It may be likely that the

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[85] Brief for Petitioner at 25-26. PANE may concede the absurdity of this interpretation, but many other antinuclear groups have unabashedly pushed for its adoption. In the past six months, and in particular since this court's 7 January 1982 judgment, psychological stress contentions have been raised in four separate proceedings: two operating license proceedings, a construction permit proceeding, and a special license revocation proceeding. *See Carolina Power & Light Co.*, NRC Docket Nos. 50-400, 50-401 (contentions raised 17 Feb. 1982); *Cincinnati Gas & Elec. Co.*, NRC Docket No. 50-358 (previously rejected contention raised again 4 Mar. 1982); *Public Serv. Co. of Oklahoma*, NRC Docket Nos. 50-556, 50-557 (contention raised 1 Feb. 1982); *Consolidated Edison Co. of New York* and *Power Auth. of State of New York*, NRC Docket Nos. 50-247-SP, 50-286-SP (contention raised 8 Dec. 1981). In each instance, the contention is that the NRC must consider the psychological stress resulting from the mere existence of a nearby operating nuclear plant.

stress alleged in the aftermath of the TMI-2 accident will be greater than the stress alleged generally, but PANE would be hard-pressed indeed to provide any justification for interpreting the "plain meaning" of "health and safety" to include "post-traumatic psychological stress" but not other kinds of psychological stress. As the Commission stated, "we cannot believe that [Congress] meant that "health" under the Atomic Energy Act, should clearly encompass the psychological well-being of persons fearful of a second nuclear accident in their vicinity, while equally clearly excluding the mental health of persons who fear that their locality may experience its first nuclear accident." [86]

It was also reasonable for the Commission to note that "the major contribution which it can make to the alleviation of psychological stress is to make sound technical decisions in its areas of expertise." [87] If the AEA were read to require NRC attention to psychological reactions to nuclear power, the result might be a substantial shift in the agency's allocation of resources away from its chief responsibility of ensuring the technical safety of operative reactors. Since the NRC does not have expertise on mental distress, the result inevitably would be a reduced ability to attend to the safety issues at hand.[88]

In sum, petitioner cannot justify its position by offering any reasoned interpretation of the statute which will apply generally in the future. There simply is no basis for this court to overrule the agency's interpretation. The AEA does not require consideration of psychological

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[86] NRC op. at 20.

[87] *Id.* at 11.

[88] "A technical agency cannot and should not be expected to devote its resources to developing expertise in the categories and subcategories of psychological stress alleged to be peculiar to the particular technology which that agency regulates." *Id.* at 17.

stress allegedly resulting from fear of a nuclear accident, regardless whether an accident has previously occurred in the vicinity.

III. Conclusion

The majority has erred in its construction of NEPA. I have given detailed attention above to the many problems with the majority's analysis, but I also think it worthwhile to point out the flawed premises that seem to underlie the decision. The majority sums up its treatment of the NEPA issues by declaring:

> In the wake of the most publicized nuclear accident of our time, the people of the Three Mile Island area—and the people of the nation as a whole—are entitled to the protections Congress provided in the National Environmental Policy Act. The government must not proceed to make decisions that might have a momentous effect on the psychological health and community well-being of its citizens without first giving careful, responsible consideration to the consequences its actions might have. By enacting NEPA Congress meant to assure that no federal decision—especially one of this importance—would be made in the shadow of environmental ignorance.[89]

The points the majority deems worthy of great emphasis—that this was "the most publicized nuclear accident of our time," that "the people of the nation as a whole" are somehow and for some reason entitled to NEPA consideration in this case, and that NEPA was meant to apply "especially" to decisions "of this importance"—are revealing.

They suggest a fundamental finding that the TMI-2 accident must not be allowed to pass without requiring the NRC to ask whether nuclear power, at least at this one site, should be allowed to *continue at all.* Whether to continue at all is a finding beyond the power of any

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[89] Maj. op. at 28.

agency—or any court. Congress, wisely or unwisely, has made the decision that this country will develop nuclear power.[90] No court has the power to rewrite NEPA to impose additional conditions, certain to produce long delays and perhaps ultimately impossible to fulfill. Congress knows everything that this court knows—and more—about the accident at TMI-2. When the standards by which the agency is to act under either NEPA or AEA are to be changed, Congress will determine in what direction and degree.

At the heart of the majority view is a belief that nuclear power and its attendant risks must be judged under some special standard. I submit that this represents a blindness toward the larger picture. Energy production of any sort is risky. Coal is a primary alternative to nuclear power. Yet 150 coal miners die each year, and many more contract debilitating diseases.[91] As the reliance on coal increases—as when a court prevents a licensed nuclear plant from reopening—these risks increase. And, most important, these risks fall almost exclusively on one group of society, human beings not among the more privileged in our America. The risks of nuclear power, in contrast, fall upon rich and poor alike. Yet the majority expresses apparent indignation at the thought that "the people of the Three Mile Island area . . . and the people of the nation as a whole" might be deprived of a chance to argue that the psychological strain of living with the risk of nuclear power is too great to permit TMI-1 to operate. Apparently the risk should remain where it traditionally has fallen, on those who produce the energy rather than on those who use it.

This special fear of nuclear power ultimately serves to institutionalize a fear of taking risks at all. It would

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[90] This is a decision paralleled in every other country with access to the technology and the money to pay for it.

[91] *See* note 37 *supra*.

seem to me quite logical to attempt to treat the stress resulting from the TMI-2 accident and to take all necessary steps to minimize the possibility of an accident that might cause similar stress in the future. But petitioners instead have insisted, and the majority has agreed, on a quite different and ultimately far-reaching orientation: when the problem is psychological stress, the solution is not to help individuals overcome their fears, but to determine whether the feared activity should be abandoned.

We have thus come a long way in fifty years, from a time when the President of the United States was widely and enthusiastically applauded for declaring: "The only thing we have to fear is fear itself." Now the fear itself necessitates an environmental assessment. All risky activity must grind to a halt in the interim. Inaction has become epidemic, and delay is maximized. I do not believe the Congress intended NEPA to constrain federal action on these psychological and emotional bases. Accordingly, I respectfully dissent.

WRIGHT, *Circuit Judge, dissenting on the Atomic Energy Act issue*: The Nuclear Regulatory Commission has abdicated a significant part of its statutory responsibility to protect the health and safety of the American people. It has taken the position that, even though the Atomic Energy Act prohibits the grant of a license if the public health will be endangered, licensing proceedings may ignore potential effects on psychological health.[1] Today the court, giving undue deference to the agency's views, endorses this erroneous interpretation of the statute. I therefore dissent.

In my view, the plain meaning of the statute compels the Commission to consider psychological health contentions in licensing proceedings. The Commission may not grant a license if, in its opinion, "the issuance of a license to [the applicant] would be inimical to • • • the health and safety of the public." 42 U.S.C. § 2133(d) (1976). Not all fears and worries, of course, are psychological health effects within the definitions of medical science. The adverse psychological impact of restarting TMI-1 may or may not rise to the level of a health problem; even if it does, the same might not be true of the fears and anxieties of neighbors of other power plants. Drawing these lines, on the basis of the facts, is the task of the Commission. If operation of a nuclear facility would be inimical to the psychological health of the public, the Commission must not approve operation. On the other hand, if investigation shows that allegations of psychological health effects are unfounded or that the effects are *de minimis*, the Act does not prohibit grant of a license. In short, the statute requires the Commission to make its decisions in light of full information.

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[1] The present appeal arises out of the Commission's proceedings on whether to restart Three Mile Island Unit 1 (TMI-1), but the Commission's interpretation of the Atomic Energy Act applies to licensing proceedings as well.

Unfortunately, the Commission's position short-circuits this process of scientific assessment and informed decisionmaking. The court affirms the Commission, taking a "deferential posture" and asserting that "[t]here simply is no basis for this court to overrule the agency's interpretation." Wilkey opinion (AEA) at 31, 36. I respectfully submit that this is a case in which such deference is inappropriate. As the Supreme Court recently reiterated,

> The interpretation put on the statute by the agency charged with administering it is entitled to deference, * * * but the courts are the final authorities on issues of statutory construction. They must reject administrative constructions of the statute, whether reached by adjudication or by rulemaking, that are inconsistent with the statutory mandate or that frustrate the policy that Congress sought to implement. * * *

FEC v. Democratic Senatorial Campaign Committee, —— U.S. ——, ——, 50 U.S.L.W. 4001, 4002 (November 10, 1981). In my view, the legislative background shows that the Commission's constricted interpretation of "health" must be rejected.

Congress did not restrict the Commission's mandate to "physical health" or to "special hazards of radioactivity."[2] Instead it used the broad, open-ended term "health" in the Atomic Energy Act. Aware that relatively little was known about the health dangers of atomic energy at the time the Act was passed in 1946 and revised in 1954, Congress acted wisely for the future. The language of the statute goes beyond the specific health hazards then known to the scientific community. It assures that the statute will continue to

[2] This test was adopted by the First Circuit in *New Hampshire v. Atomic Energy Comm'n*, 406 F.2d 170 (1st Cir.), *cert. denied*, 395 U.S. 962 (1969). The Commission relies heavily on the court's analysis of legislative history.

provide full protection to the public as knowledge about the potential health effects of atomic energy expands.

In 1946, for example, many of the long-term health effects of large-scale radiation exposure were as yet unknown. Studies of the survivors of Hiroshima and Nagasaki, which began to be published in the mid-1950's and which continue to the present day, have provided the largest set of data on the effects of ionizing radiation on production of leukemia, other cancers, and genetic effects in human beings. *See* MEDICAL RESEARCH COUNCIL, THE HAZARDS TO MAN OF NUCLEAR AND ALLIED RADIATIONS (1956), *reprinted in The Nature of Radioactive Fallout and Its Effects on Man, Hearings Before the Special Committee on Radiation of the Joint Committee on Atomic Energy*, 85th Cong., 1st Sess. 1539, 1554, 1562, 1581, 1624-1626 (1957); CASARETT & DOULL'S TOXICOLOGY 511 (J. Doull, C. Klaassen & M. Amdur eds., 2d ed. 1980). Yet it would be absurd to suggest that leukemia and genetic defects fall outside the scope of the Atomic Energy Act. Similarly, even though Congress did not refer explicitly to psychological health and even though Three Mile Island has given the scientific community its first opportunity to study the possible psychological health effects of a nuclear power plant accident, the Atomic Energy Act requires the Commission to consider these effects.

The Atomic Energy Act of 1946 created the Atomic Energy Commission, predecessor of the Nuclear Regulatory Commission, and entrusted it with broad responsibility for protecting the public health and safety. The statute reflects Congress' acute awareness that nuclear energy could be extremely dangerous, and that scientific knowledge of the potential hazards was completely inadequate. Congress established an absolute government monopoly over production of fissionable material, recognizing that this activity was "attended by serious hazards to public health and safety" and that the responsi-

bility for minimizing these hazards is "clearly a governmental function." S. Rep. No. 79-1211, 79th Cong., 2d Sess., *reprinted in* [1946] U.S. Code Cong. Serv. 1327, 1330. It also imposed strict controls over licensing of devices utilizing atomic energy, because it believed that such devices, "if widely used, would so multiply potential hazards to national health and safety that even careful Government regulation would fail to provide adequate safeguards." *Id.* at 1333. At the same time Congress realized that the scope and extent of potential hazards were unknown. Recognizing the imperative need for "an ever-expanding fund of theoretical and practical knowledge," the bill encouraged both government and private research in several fields, including "protection of health during research and production activities." *Id.* at 1330; H.R. Rep. No. 79-2478, 79th Cong., 2d Sess. 8 (1946).

Given this context of acknowledged uncertainty, the Commission is simply wrong when it asserts that the 1946 Act limited health hazards to nonpsychological "special hazards of radioactivity." Brief for respondents at 31. Neither the statute nor the legislative history gives any indication that Congress rejected the ordinary meaning of the word "health"—psychological as well as physical health. The Act gave the Commission authority to establish regulations that it might deem "necessary or desirable to protect health or to minimize danger from explosions and other hazards to life or property." Atomic Energy Act of 1946, Pub. L. No. 79-724, § 12(a)(2), 60 STAT. 755, 770. The Senate report paraphrased the language of the statute: regulations were "to minimize the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials." [1946] U.S. Code Cong. Serv., *supra*, at 1335. Thus, as new types of health hazards were scientifically established, the range of Commission regulation would expand.

In 1954 Congress amended the Atomic Energy Act to establish a role for private industry in the development

of atomic energy. The Commission was authorized to grant licenses to private enterprises to operate nuclear facilities. Comparing the situation in 1954 with that in 1946, the House and Senate committees optimistically reported, "It is now evident that greater private participation in power development need not bring with it attendant hazards to the health and safety of the American people." S. Rep. No. 83-1699, 83d Cong., 2d Sess. 3 (1954); H.R. Rep. No. 83-2181, 83d Cong., 2d Sess. 3 (1954). This reassuring statement must be read in conjunction with Section 103 of the 1954 Act, which imposed a heavy responsibility on the Commission: no license could lawfully be issued "if, in the opinion of the Commission, the issuance of a license to such person would be inimical to the common defense and security or to the health and safety of the public." Pub. L. No. 83-703, § 103, 68 STAT. 919, *codified at* 42 U.S.C. § 2133(d) (1976). The 1954 Act may have been adopted to promote development of nuclear energy, but it did not authorize the Commission to proceed at the expense of health and safety. *Id.* §§ 2(a), (b), (d), (e), 3(d). Again the statute did not define or limit the term "health" in any manner.

The 1946 and 1954 Acts established the Commission's mandate to protect health in plain language which encompasses psychological health. No subsequent action by Congress has limited the scope of the Commission's responsibilities. The Commission quotes from a 1957 study report by the staff of the Joint Committee on Atomic Energy, Statement of Reasons at 8-9, but the quoted language does not support the Commission's position. Even if hazards created by potentially harmful radiation are "[t]he special problem of safety in the atomic field," it does not follow that they are the *only* problem of health and safety that the Commission must take into account. In addition, the Commission rests on the legislative history of amendments to the Atomic Energy Act adopted in 1956 and 1965. *Id.* at 9-10. But neither

amending statute dealt with the Commission's licensing responsibilities over nuclear power plants. Tangential, imprecise descriptions of the Commission's health responsibilities are entitled to no weight.

In short, the Commission has failed to offer any convincing evidence that the Atomic Energy Act excludes mandatory consideration of one of the important components of health—psychological health. An examination of the original sources shows that the Commission lifts scattered passages out of context from committee studies and committee reports. Given the plain meaning of the statutory language, I cannot agree that the Commission's resulting interpretation of the Act is within the bounds of reasonableness.

As a fallback position the Commission urges that, even if psychological health is "health" under the Atomic Energy Act, consideration of psychological health is purely discretionary. This contention is without merit. The Act unequivocally bans issuance of a license to any facility whose operation would be inimical to the public health and safety. The Commission has broad procedural discretion, but it may not avoid its substantive responsibilities by pleading lack of expertise or by pointing to the difficulty of the task. If the Commission is not currently equipped to assess psychological health effects, it must add qualified experts to its staff to fulfill its statutory duties. No other government agency, state or federal, has the power to grant or deny nuclear power plant licenses; therefore it is disingenuous for the Commission to defer to "agencies with expertise in the area of mental health." Statement of Reasons at 17. In addition, the Commission exaggerates the problem of quantification. Its own Atomic Safety and Licensing Board concluded that, at least for purposes of NEPA, "psychological stress is sufficiently quantifiable." 11 NRC 297, 301 (1980), Joint Appendix at 67.

The importance of today's interpretation of the Atomic Energy Act should not be underestimated. Bearing the imprimatur of this court, it will be applied not only in the TMI-1 restart proceeding but in all future Commission licensing proceedings.[3] It permits the Commission to license a nuclear plant even if studies have shown beyond the shadow of a doubt that its operation would seriously damage the psychological health of large numbers of Americans. This result is inconsistent with the plain language and ordinary meaning of the Atomic Energy Act. I respectfully dissent.

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[3] In the narrow circumstances of the present case, which addressed only the scope of the Commission's investigation, the court's holding under NEPA has given PANE the relief it seeks. Indeed, for this reason I am not convinced that it was necessary for the court to reach the Atomic Energy Act question.

CLI-80-39

Cite as 12 NRC 607 (1980)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-289
(Restart)

In the matter of

METROPOLITAN EDISON COMPANY, *et al.*
(Three Mile Island Nuclear Station, Unit 1)

COMMISSIONERS:

JOHN F. AHEARNE, Chairman
VICTOR GILINSKY
JOSEPH M. HENDRIE
PETER A. BRADFORD

December 5, 1980

Finding itself to be evenly divided on the certified question from the Licensing Board of whether contentions based on psychological stress should be accepted in the TMI-1 restart proceeding, the Commission announces that (1) it will reconsider the question upon appointment and confirmation of a fifth Commissioner; and (2) in the meantime, requests to admit contentions based on psychological stress are effectively denied.

MEMORANDUM AND ORDER

The Commission's Order and Notice of Hearings dated August 9, 1979 stated that the Commission had not determined whether psychological stress could be legally relevant to the TMI-1 restart proceeding. The Commission directed that parties wishing to raise psychological stress or related subjects

before the Board should brief the Atomic Energy Act and National Environmental Policy Act (NEPA) issues relevant to the acceptability of such contentions and that the Board should then certify these issues to the Commission for final decision.

Pursuant to this order the Board on February 22, 1980 certified to the Commission the issue whether psychological stress can be legally relevant to the TMI-1 restart proceeding. In its certification the Board stated that "psychological stress is probably not cognizable under the Atomic Energy Act but . . . the Commission might conclude to the contrary." However the Board also stated its view that psychological stress is cognizable under NEPA, and recommended that the Commission permit the Board to consider psychological stress with the aim of mitigating community fears about the operation of TMI-1.

After reviewing the Board's certification and the briefs filed by the parties, the Commissioners are evenly divided on the question whether the Board should consider psychological stress. Separate views of the Commissioners are attached to this order. A vote of 2-2 on this question constitutes an effective denial of requests to admit contentions based on psychological stress. Therefore, the Licensing Board should consider this to be a denial of these contentions. Further, the Commission decided that it will reconsider and vote on the question when the makeup of the Commission is altered by the appointment and confirmation of a fifth Commissioner. In the meantime, there is no authorization for the Board to admit psychological stress contentions.

It is so ORDERED.

For the Commission

Samuel J. Chilk
SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, DC,
this 5th day of December 1980.

CHAIRMAN AHEARNE'S SEPARATE VIEWS

The Licensing Board concluded: "The Nuclear Regulatory Commission, within its discretion, may and should consider psychological stress and community fears under NEPA for the purposes of mitigating the effects of its TMI-1 licensing activities."[1]

I agree that the NRC should consider psychological stress and community fears—but not in the way the Board intended.

As has been evident throughout the past 15 months, the NRC *is* aware of the psychological stress in the communities surrounding TMI. We have gone through careful and extensive processes to insure that the public health and safety is protected and, to the best of some of our abilities, that we explain each step we are proposing or approving.

However, as was apparent in our treatment of the venting issue, an NRC licensing action is not an appropriate forum for psychological stress issues. There may be adjudicatory bodies which are appropriate for such issues—the NRC is not one.

The Board concludes that ". . . NEPA permits the NRC within its discretion and *without an EIS*, to consider community and individual fears, and to take reasonable actions to mitigate these fears."[2]

The Board has, I believe, correctly identified the most reasonable such action:[3]

> "Certainly it is true that the best way to minimize any psychological stress in the communities around TMI-1 is to make the plant safe or not allow it to operate."

This, of course, is also what the Board (and the Commission) explicitly is charged with doing. In addition, I certainly en-

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[1] *Metropolitan Edison Company* (Three Mile Island Nuclear Station, Unit 1), LBP-80-8, 11 NRC 297, 309 (1980).

[2] *Id.* at 306.

[3] *Id.* at 308.

dorse the desirability of disseminating accurate information and, to the extent the NRC can assist, in assuring such information is "trusted."[4]

Finally, in terms of the specific legal argument, I agree with the Licensing Board that "psychological stress is probably not cognizable under the Atomic Energy Act,"[5] and I believe that the issue of whether NEPA provides sufficient authority to impose mitigation measures on the licensee in the context of the restart proceeding is problematical.

Consequently, I agree with the Licensing Board that we are not *required* to consider psychological stress. I agree that the best way to decrease such stress is to insure the plant is safe if it is approved for operation. I believe the NRC (Commission and staff) must insure clear and accurate information is provided regarding what is being done. And I believe the Licensing Board and the Commission should play their proper roles in assuring that safe operation be the appropriate requirement.

I do not agree with the separate views of Commissioners Gilinsky and Bradford. Basically I believe their analyses present the issues as being much simpler than they really are.

For example, in commenting on the approach I have advocated Commissioner Gilinsky states: "Ironically, in its only ruling to date on safety issues in this case, the Commission took the narrowest possible view of its safety responsibilities to preserve the discredited assumptions of the hydrogen control rule." The Commission's "view of its safety responsibilities" is more complicated than one would be led to believe from reading Commissioner Gilinksy's comment. The Commission has made no final decision concerning the issues related to hydrogen control. It has already taken some actions and is actively considering additional steps.

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[4] *Id.* at 299.

[5] *Id.* at 299.

Similarly, an example of Commissioner Bradford's failure to address the complexities inherent in this issue is his assertion that "The Commission has the authority, at least under NEPA, to consider psychological factors and to take actions necessary to mitigate them." To support his proposition Commissioner Bradford cites a case in which the Commission was found to have jurisdiction to mitigate the environmental impacts of transmission lines.[6] While this case may have some relevance, it is hardly conclusive.

Although I have additional disagreements with the views of Commissioners Gilinsky and Bradford, including disagreements with views which the reader of Commissioner Bradford's opinion might believe belong to those who disagree with Commissioner Bradford, e.g., to me, past experience shows that reasoned arguments are of little interest to those whose minds are made up.

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[6] Although the Court described the Licensing Board decision (which was based in part on visual impacts of the transmission lines and in part on the more traditional consideration of impact on waterfowl) in the "Background" discussion, it did not focus on the need for or propriety of considering various types of impacts. There was no reason for it to address the question since petitioners had conceded the proposed routes were superior. *Public Service Company of New Hampshire* v. *NRC*, 582 F.2d 77, 85 n. 15 (1st Cir. 1978).

SEPARATE VIEWS OF COMMISSIONER HENDRIE

The Atomic Safety and Licensing Board conducting the proceeding on the proposed restart of Three Mile Island Unit 1 has certified to the Commission, by decision of February 22, 1980, the question whether the effect of psychological stress on residents of the TMI area is an issue within the scope of the proceeding. The Licensing Board expressed the view that psychological stress is "probably not cognizable under the Atomic Energy Act," but the Commission, as an exercise of discretion, "may and should consider psychological stress and community fears under NEPA."

For the reasons set forth below, I believe that "psychological stress and community fears" need not and should not be included within the scope of this proceeding. It should be recognized that we are dealing in this case with a situation in which the actual level of risk is essentially irrelevant to the psychological stress claimed to be suffered. Moreover, the psychological stress at issue is not that associated with actual exposure to radiation—although individual petitioners may have been so exposed—but the stress caused by the possibility that they and others might be so exposed by future operation. There is no way to allay that fear except not to build or operate the reactor. That is not to say that these are unimportant matters—on the contrary, they have been and must continue to be of concern to the Commission and to other relevant federal and state authorities. It does not automatically follow, however, that because these concerns are important, the most appropriate way for the Commission to take account of them is to adjudicate, in formal proceedings, the precise nature and degree of fears related to the restart of TMI-1. As I view the mandate of this Commission under the law, it is to permit the operation of licensed facilities upon a finding that they are safe; petitioners would have us consider whether the existence of psychological stress in the community should lead us to deny permission to operate the reactor regardless of our judgment that the plant is safe from a technical standpoint, a decision which would be contrary to the mandate of the statute. Accordingly, I do not

believe that consideration of psychological impacts in the adjudicatory proceeding on the restart of TMI Unit 1 would serve a useful public purpose. Rather, the most appropriate way for the Commission to take account of fears related to TMI-1 is, first, to assure that the technical decision on restart is sound; and second, if the decision is to permit restart, to make sure that the public understands, through accurate and comprehensible information, fully disseminated, the basis for the Commission's determination that the plant can operate safely.

I. Health and Safety Under the Atomic Energy Act

The first question in this case is whether, as intervenor PANE asserts, the Commission is required by the Atomic Energy Act to consider the issue of psychological stress in this licensing proceeding. PANE's argument is based upon a broad reading of the words "public health and safety" in the statute. Read literally, the words are sufficiently broad to allow consideration of mental health under the rubric of "public health." This is hardly surprising. However, the question whether the Commission's responsibility to protect "public health and safety" encompasses mental health problems caused by fear of radiation cannot be resolved by recourse to the text of the Act alone. Neither the Act nor its legislative history makes specific reference to psychological disorders, or psychologically based physical illnesses, related to fear of radiation. We must therefore ask whether it is likely that Congress mandated that the Commission must take such mental health impacts into account in deciding whether a particular nuclear power plant can operate with reasonable assurance of public health and safety.

The Congress which passed the Atomic Energy Act of 1946 created the Atomic Energy Commission in order to bring a maximum of technical expertise to bear on complex and hazardous activities associated with a developing technology. When the Atomic Energy Act of 1954 authorized the development of a civilian nuclear power industry, it was understood from the first that the public might well be apprehensive about a tech-

nology associated in the minds of most with the destructive power of atomic weapons. One of the major reasons for providing for public hearings on nuclear power plants was to provide a means for educating the public about nuclear energy and the measures taken to assure its safety. The 1965 report to the AEC by its Regulatory Review Panel, for example, characterized the most significant functions of public hearings as including a demonstration that "the AEC has been diligent in protecting the public interest" and that the applicant's proposal had received a "thorough and competent review." Congress implicitly acknowledged that public fears about nuclear reactors were a reality which had to be addressed; the means chosen by Congress was to have technical issues of nuclear safety addressed and resolved by technical experts in a public licensing review process administered by the Atomic Energy Commission. Thus, it is not only that there is no suggestion in the Act, its legislative history, or more than a quarter century of Congressional oversight that the Commission's decisions in licensing proceedings were intended to encompass psychological stress associated with particular licensing actions, it is also that Congress envisioned that the Commission's expert judgments, publicly arrived at, would help serve to prevent or allay public fears.

In approaching this issue, moreover, we do not deal with an altogether blank slate. It is useful—though in my view not necessarily dispositive of this case—to consider how the definition of "public health," as the term is used in the Atomic Energy Act, was addressed by the First Circuit Court of Appeals in *New Hampshire* v. *Atomic Energy Commission*, 406 F.2d 170 (1969). In that case, the State of New Hampshire contended that the AEC was obligated to consider the effects of discharges of hot water into the Connecticut River. The State reasoned that the discharges reduced the capacity of the river to assimilate waste and thereby impinged on the public health.

The First Circuit's thorough and scholarly exposition of the text of the statute and its legislative history led it to the

conclusion that New Hampshire's contention was in error. It first considered the State's plea that the issue be resolved on the "present day plain meaning" of the terms "health" and "safety." Though the court found this approach "tempting," it was constrained to observe that "we do not presently feel that we fulfill our function responsibly by simply referring to the dictionary." 406 F.2d 170, 173. The Court explained:

> Here we feel a very palpable restriction in this history surrounding the problem addressed by the Congress, the subsequent Congressional confirmation of the limited approach taken by the Commission . . . and a recognition of the complexity of administrative arrangements which would attend a literal definition of public health and safety as these terms are used in the Atomic Energy Act.
>
> The history of the 1954 legislation reveals that the Congress, in thinking of the public's health and safety, had in mind only the special hazards of radioactivity. . . . The Joint Committee, in its first study report, made its focus clear when it said, "The special problem of safety in the atomic field is the consequence of the hazards, created by potentially harmful radiations attendant upon atomic energy operations." 406 F.2d 170, 173-4.

The court observed that the legislative history of the 1954 Act was of little use in finding a definition of "health and safety," for it was "obvious" that the meaning of terms had been deemed settled at the time the 1946 Act was passed. 406 F.2d 170, 174 n.4. The court then traced the interpretations of "health and safety" applied by the Commission and the Joint Committee on Atomic Energy in subsequent years. In 1965, for example, in enacting amendments to the Atomic Energy Act, the Joint Committee's report on the legislation stated that the "AEC's regulatory control was limited to considerations involving the common defense and security and the protection of the health and safety of the public with respect to the special hazards associated with the operation of nuclear facilities." 406 F.2d 170, 175, quoting S. Rep. No. 390, 89th Cong., 1st Sess., p. 4 (1965).

The present case in many ways parallels the issue in *New Hampshire* v. *AEC*. There as here, the contention was made that the Commission need go no further than its dictionary; "health" includes "mental health," it is now argued, and psychological stress must therefore be evaluated. There as here, the contention was made that allegations of effects on health must be considered by the agency, so long as a causal chain can be hypothesized which has its origin in the operation of the reactor. But as the court in *New Hampshire* recognized, it is necessary to go beyond both dictionary definitions and hypothesized causal chains to consider the Congressional purpose underlying the Act, and the context in which it was passed. The crucial question must be whether Congress intended to require the Commission to consider a particular kind of effect in licensing nuclear power plants. As I have indicated, I find not a shred of evidence to suggest that Congress mandated the Commission to consider psychological stress in its licensing proceedings.

Furthermore, we must not lose sight of the reality—seemingly self-evident—that technical agencies are created by the Congress to perform specific tasks within a certain area of expertise. This agency's expertise includes radiological health and safety and environmental effects related to nuclear power plant construction and operation; it does not include psychological stress. Given that resources are finite, the Commission could not develop expertise in the area of psychological stress without a significant reallocation of resources. I cannot believe that the Congress, in passing the Atomic Energy Act, intended that the Commission should divert resources from its real task—that of protecting public health and safety from radiological hazards posed by nuclear power plants—and reassigning them to the chimerical task of evaluating public anxieties.

The public would indeed have grounds for concern if members of this agency's staff, instead of working to reduce the likelihood of radiological harm to the public, were assigned instead to analyze the degree to which citizens worried about

such harm. It should be obvious that an unsafe plant is not made safe by the fact that local citizens are unconcerned about it, any more than a safe plant is made unsafe by the fact that local residents are deeply anxious about it. The point, again, is not that public concerns should be ignored, but rather that the best way to address those concerns in this case is for the agency to do its statutorily mandated job of protecting the public's physical health and safety and to publicize effectively its conclusions and the facts which underlie those conclusions.

II. Evaluation of Costs and Benefits Under NEPA

The assertion is made that the Commission, apart from its responsibilities under the Atomic Energy Act, is obligated under the National Environmental Policy Act (NEPA) to consider stress occasioned by fear of the operation of TMI-1. I believe that the Commission has the discretionary authority to consider such effects, but that the present circumstances do not warrant such consideration in this case.

First, the Commission prepared an environmental impact statement on the operation of TMI-1 before the facility was ever allowed to operate. After the accident at TMI-2, the Commission ordered the licensee to take a variety of safety-enhancing measures as a condition for resuming operation of TMI-1. None of those measures has a significant impact on the environment, and there is therefore no "major federal action significantly affecting the quality of the human environment" that requires preparation of an environmental impact statement as a matter of law.

Even if an environmental impact statement were required, however, applicable case law indicates that most courts consider psychological impact to be too intangible and unquantifiable to require analysis under NEPA. The cases are well known. In *Hanly* v. *Kleindienst* (Hanly II), 471 F.2d 823 (1972), *cert. denied*, 412 U.S. 908 (1973), the Second Circuit Court of Appeals stated that it was "doubtful whether psychological and sociological effects upon neighbors constitutes the type of factors that may be considered in making such a

determination [i.e., whether an impact statement is required] since they do not lend themselves to measurement." The D.C. Circuit Court of Appeals quoted *Hanly II* with approval in commenting with respect to "some questions of esthetics" that "like psychological factors they 'are not readily translatable into concrete measuring rods.' " *Maryland-National Capital Park and Planning Commission* v. *U.S. Postal Service*, 487 F.2d 1029 (1975). The Sixth Circuit *[sic]*, in a case involving planned construction of public housing, declared in *Nucleus of Chicago Homeowners* v. *Lynn:* "To the extent that this claim can be construed to mean that HUD must consider the fears of the neighbors of prospective public housing tenants, we seriously question whether such an impact is cognizable under NEPA." 524 F.2d 225, 231 (1975), *cert. denied*, 424 U.S. 967 (1976). That decision was cited with approval by the Seventh Circuit in *First National Bank of Chicago* v. *Richardson*, which endorsed the *Hanly II* approach and added: "As regards public 'sensibilities' aroused by criminal defendants, we question whether such factors, even if amenable to quantification, are properly cognizable in the absence of clear and convincing evidence that the safety of the neighborhood is in fact jeopardized." 484 F.2d 1369, 1380 n.13 (1973).

The cases are not unanimous on this point—a different panel of the Second Circuit reached a different result in *Hanly* v. *Mitchell (Hanly I)*, 460 F.2d 640, *cert. denied*, 409 U.S. 990 (1972), and the Fifth Circuit ruled in *Image of San Antonio* v. *Brown*, 570 F.2d 517 (1978), that socio-economic impacts may be considered where there is a primary physical impact on the environment—but the view that psychological impacts are outside the scope of NEPA is clearly the majority position of the Court of Appeals decisions on the subject.

The counter-argument is made that the cited cases are inapposite, because the allegations presented here deal not with mere psychological distress, but with physical manifestations, clinically detectable, resulting from that distress. In my view, the contention that there is a legal distinction between psychological stress that does and does not have clinically detectable

symptoms is without merit. Presumably, psychological distress will always be accompanied by physical symptoms in a certain proportion of the persons affected. As a legal matter, I see no basis for differentiating between psychological stress that has physical symptoms and that which is without physical manifestations as a means of deciding whether the Commission's licensing proceedings should adjudicate the nature and degree of such stress. In either case, the problems of quantification and proof would be such as to make rational factfinding extremely difficult, as licensing boards and the Commission struggled to decide between the largely unprovable assertions of opposing sets of expert witnesses.

It requires no great flights of the imagination to demonstrate that, absent extraordinary circumstances, the attempt to subject psychological stress to a cost-benefit analysis would have a destructive effect on the hearing process. The purpose of such a cost-benefit weighing of psychological impacts would be, presumably, to allow the Commission to require additional safety features if their cost can be justified in terms of reduced public stress. If psychological stress is determined to be an impact which must be mitigated (in the NEPA sense of that term), there would seem no obvious basis for differentiating between rationally and irrationally grounded anxieties. If anxieties are rationally based, the corrective measures which would alleviate the stress would presumably be justifiable in terms of protecting physical health and safety—irrespective of their effect on psychological stress. If the anxieties are irrationally based, on the other hand, then they are by definition not likely to be alleviated by a demonstration that some additional safety feature has been added. I cannot accept the proposition that, except under extreme conditions not presented in this case, it should be the task of the Commission's licensing boards to attempt to quantify the anxieties of the public, rational and irrational, and to calculate the reductions in those anxieties which one or another design modification might be expected to accomplish. Nor can I accept the proposition that a licensee's ratepayers should be required to bear the cost of adding unneeded features to an already safe plant in the

hope that these features will alleviate irrationally founded fears. Such an approach would not only turn the hearing process into an exercise in futility; it would also mean treating the American public with patronizing condescension.

The citizens of this country have a right to know the facts about nuclear safety, in terms which a lay person can understand. They have a right to know on what basis the agency charged with regulating nuclear safety makes its decisions. They also have a right to be regarded as capable of responding rationally to factual information. I cannot accept an approach that assumes irrationality on the part of a significant portion of the public and diverts the resources of this agency away from the task of assuring nuclear safety and devotes them instead to fruitless speculation about means of mollifying irrational fears.

The fundamental question remains the same. Did the Congress envision that the expert decision of a technically qualified agency would help to assuage public anxieties, or did it envision that the technical agency would allow its decision to hinge on its perception of the gravity of public anxieties? I believe that the answer to that question is clear, and that the appropriate means for the Commission to deal with psychological stress in this case is to make a sound safety decision and to let the factual bases of its decision be disseminated widely.

NEPA is a very broad statute and has had, as it was intended to have, a profound effect on agency decision making. But unless it is to displace the political process it must have some limits. It cannot be read to require that all conceivably relevant factors be heard by an agency including those already considered by Congress. It was intended and must be so construed to deal with *environmental* degradation. To be sure if one of a project's effects on the environment causes health problems, the associated mental impacts are in an appropriate consideration, but here we are being asked to consider effects apart from any effect on the environment.

Intervenors' argument is essentially that even if we are satisfied that the environmental impact is minimal, we must

nevertheless hear evidence on, and consider in our decision, their fears that we are wrong and the mental stress thus engendered. The short answer is that Congress had already decided that the country is to have a nuclear power program even if it makes some people uneasy.

SEPARATE VIEWS OF COMMISSIONER GILINSKY REGARDING CERTIFIED QUESTION ON PSYCHOLOGICAL STRESS ISSUE

The issue before the Commission is whether it should exercise its authority under the Atomic Energy Act and the National Environmental Policy Act to consider, along with the physical health effects, the mental health effects of a decision to restart TMI-1, the companion reactor to the one which suffered an accident in March, 1979.

In voting to allow the Licensing Board to admit contentions relating to mental health, I have been most strongly influenced by two factors. The first is the Board's recommendation, contained in its extremely well-formulated certification, that we allow it to hear these contentions. The second is the Commonwealth of Pennsylvania's argument that the Commission should investigate and consider the psychological effects of restarting TMI-1.

I attach particular importance to the position taken by the Commonwealth of Pennsylvania. Under the Atomic Energy Act, the Federal government has preempted all authority to regulate radiological hazards. Under this scheme, the Commission, the agency charged with enforcing the Federal law, has an obligation to be sensitive to the views of the preempted States. The Atomic Energy Act directs the Commission to "afford reasonable opportunity for state representatives to offer evidence, interrogate witnesses, and advise the Commission as to [an] . . . application without requiring such representatives to take a position for or against the granting of the

application."[1] When the Commonwealth requests that we "hear and consider evidence"[2] on an issue of this significance, we should heed its advice. A decision to consider stress in this post-accident case would not be a precedent for considering psychological stress in all future NRC actions.

Those opposed to admitting these contentions have argued that the proper way for the Commission to deal with mental health in this case is for it to make sound safety decisions and to widely advertise the factual bases of these decisions. Ironically, in its only ruling to date on safety issues in this case, the Commission took the narrowest possible view of its safety responsibilities to preserve the discredited assumptions of the hydrogen control rule.[3]

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[1] Section 274(1) of the Act, 42 USC 2021. The fact that this section speaks of an application for a license should not lead one to conclude that it is inapplicable to a proceeding on whether to restart a licensed reactor following an accident at the same site. The basic intent of Congress was that the States should be heard by this agency and I am certain that if Congress could have foreseen the present proceeding, it would have included restart proceedings within the ambit of this provision.

[2] Brief of the Commonwealth of Pennsylvania, p. 10, October 4, 1979.

[3] 10 CFR 50.44. This regulation prescribes the hydrogen control measures which must be present in a reactor to cope with the hydrogen generated by the reaction of zirconium fuel cladding with water during the course of an accident. The rule is based on the assumption that no more than five percent of the zirconium fuel cladding will react with water. The principal investigations of the TMI-2 accident concluded that as much as fifty percent of the zirconium cladding reacted with water during the accident. The relevant Commission decision is: In the Matter of Metropolitan Edison Company, Docket No. 50-289, Commission Order of September 26, 1980.

DISSENTING VIEWS OF COMMISSIONER BRADFORD

We decide an uncomfortable but important issue when we define the Nuclear Regulatory Commission's role in dealing with psychological stress arising from the possible reopening of a nuclear power plant at Three Mile Island. We decide the role that we, as the nuclear licensing arm of the federal government, are to play in looking out for community and individual psychological well-being that we have had an inadvertent part in damaging. Since a majority agree that we may consider psychological stress,[1] we are really deciding whether we think that individual well-being in this context is up to the individual alone, or whether the best we can do is to be of some general use by behaving well in the future, or whether we should take a somewhat more disciplined and thorough look at the question in the context of the National Environmental Policy Act.

The question before us is not whether "Congress has already decided that the country is to have a nuclear power program even if it makes some people uneasy."[2] That proposition, though true, is not in issue. Nor are we deciding whether stress related to Unit 1 is provable, whether it is quantifiable, or whether we should do anything about it. We are deciding only whether the question is of sufficient importance to allow our Licensing Board to examine further the possibility that we ought to take measures to mitigate stress and its consequences if we permit TMI-1 to reopen.

* * *

I should note at the outset that I think it unlikely that the actual reopening of TMI-1 could hinge on the psychological stress contentions as framed here. I say this because none of the governmental entities that should be most knowledgable of a stress situation requiring permanent closure of TMI-1 are presenting such contentions. While the Commonwealth of

[1] The only doubt on this proposition is in the Ahearne opinion where it is viewed as "problematical" (p. 1).

[2] Hendrie opinion, p. 11.

Pennsylvania urges that we admit and consider stress-related contentions, its brief steers explicitly clear of any substantive involvement with such contentions. If the state and local entities do not feel that the stress issue warrants their involvement, it will be hard to avoid the conclusion that stress and its consequences are not of such overriding importance to the populace as a whole as to preclude operation of the plant.

Nevertheless, the NRC should consider psychological stress and community fears under the National Environmental Policy Act for the purpose of reducing any causes of such stress that may arise from its TMI licensing activities. This is the recommendation of the Licensing Board,[3] and it is the course consistent with NEPA's requirement that "to the fullest extent possible," "utiliz[ing] a systematic, inter-disciplinary approach which will insure the integrated use of the natural and social sciences," we "assure that presently unquantified environmental amenities be given appropriate consideration."[4]

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[3] The Board's excellent discussion of the NEPA questions is attached as Appendix A. Because the Board has been thorough and because I agree with its legal analysis, I have not repeated that analysis in the body of this opinion. The Board opinion in its entirety is *Metropolitan Edison Company*, 11 NRC 297 (1980).

I should note some puzzlement with Chairman Ahearne's statement "agree(ing) with the Licensing Board that we are not *required* to consider psychological stress" (p. 2). The Licensing Board reaches no such conclusion, especially as to NEPA, and neither do I. Neither the Board nor I need to decide whether we are required by NEPA to consider stress since we conclude that the Commission should do so as a matter of discretion.

[4] 42 USC 4332(2)(A and B).

Three significant points are not in dispute among a majority of Commissioners:

1) The Commission has the authority, at least under NEPA, to consider psychological factors and to take actions necessary to mitigate them. [5]

2) The accident at TMI-2 gave rise to considerable and partially quantifiable community stress and stress-related illnesses and symptoms. The reopening of either TMI unit has the potential to reaggravate this situation to some degree. [6]

3) Some actions can be taken by NRC and the licensee to lessen psychological stress in the event that Unit 1 were permitted to operate again. Such actions may not be justifiable solely in terms of reduced radiation exposure, although—as the Board has pointed out by way of example—activities that

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[5] The analogy to the consideration and mitigation of the equally subjective and unquantifiable subject of "visual insult" endorsed in *Public Service Company of New Hampshire* v. *NRC*, 582 F.2d 77, 82 (1978), is useful. This case is discussed in the Board opinion at p. 11 and p. 20. The Ahearne view that the court did not focus on the "propriety of considering various types of impacts" (Ahearne opinion, p. 2) seems to me to be irreconcilable with the Court's quite clear endorsement of the propriety of considering and mitigating visual impacts. These impacts were the basis for the NRC decision to reject 200 foot high steel lattice-work towers in favor of "75 foot wooden H-frames compatible with the surrounding forest." 582 F.2d, 77, 80. The court upheld this condition.

[6] The psychological impacts of a disaster of larger magnitude than TMI are analyzed in a considerable body of literature arising from the Buffalo Creek flood. See, for example, *Everything In Its Path: Destruction of Community in the Buffalo Creek Flood*, Kai T. Erikson (Simon and Schuster, New York, 1976), especially pp. 135-259. This reading provides extensive and astonishing examples of the tangible manifestations of post-accident stress. One must, of course, acknowledge the more drastic nature of that accident, but it does not always diminish one person's stress to know that another has been through worse. Furthermore, the Buffalo Creek dam was not rebuilt.

enhance the accuracy and credibility of information coming from the licensee and the NRC probably also enhance emergency preparedness.

What remains at issue is the Commission's choice of the most effective way to deal with stress-related harms. One view is that of the Board, with which I agree. The other view would exclude stress-related harms from this proceeding because they are being dealt with in other ways such as the activities of the NRC's TMI Program Office, the increased thoroughness of our technical review processes, and efforts to educate the public. This approach assumes a faith in NRC that may have existed to some degree before the accident, but that does not now exist for many of those members of the TMI public most likely to be presenting stress-related contentions and, for that matter, most likely to be susceptible to stress and its consequences. One need not fully share this public skepticism to find it understandable. [7]

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[7] There is a theory of the TMI accident which holds that there was never any public danger and that the evacuation and resultant stress were ascribable solely to NRC miscalculations regarding the likelihood of an explosion. According to this line of thought, stress resulted from governmental bungling rather than real radiation danger and is therefore irrelevant to the licensing or the restart of any nuclear power plant.

In fact, there were several mistakes in the assessments of the TMI accident, and not all of them were on the side of caution. It is apparently true that the hydrogen bubble explosion that dominated public awareness starting on March 30, 1979, could not have occurred.

But it is equally true that on March 28, when all of our assessments and statements were reassuring, the core was, unbeknownst to us, partially uncovered for some hours. This circumstance could, in light of what we then regarded as likely iodine behavior, have been assumed to lead to much greater releases of radioactive iodine than actually occurred and perhaps also to molten fuel with uncertain consequences. While this was going on the Commission was supporting licensee efforts to depressurize into a configuration even more

The fact is that our technical evaluative processes alone cannot eliminate or substantially mitigate much of the stress in the TMI area. Those processes and this agency inadvertently helped to bring about the accident. People near TMI who know little else about NRC know that. Their lack of belief in the NRC and in its concern for them is a basic source of the problem. Furthermore, our technical review process cannot eliminate very low-level radiation exposures or some remote risks of a second accident. Concerns about this residual uncertainty have a tangible basis that the technical licensing process cannot reach.

The best way to assess the significance of these risks and effects in the special case of the TMI public is to permit them to be raised and considered as the Board has recommended. To do otherwise is to assume once again that the Commission did or will think of everything[8] (even though one of the reasons given for not considering stress is that we have little competence in the area). The Board has given hypothetical examples of ways in which conditions mitigating stress might be part of any restart decision. These examples contradict the claim that

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dangerous (again unbeknownst to us) than the event actually in progress.

Thus, stress arising from uncertainty about NRC competence or regulatory techniques cannot be dismissed as irrational or unrelated to radiation hazard. Indeed, I can conceive of no way to alleviate the stress or fears of another person or group that does not begin with respecting that stress or fear. Such respect may not come easily when a fundamental source of their concern is doubt about our competence and our veracity. Nevertheless, the most herculean efforts to rebuild confidence will largely be a waste of time if they come freighted with our insistence that stress not be considered in the only forum that actually has the power to deal with and condition the restart of a TMI power plant.

[8] For another example, see "Further Commission Guidance for Power Reactor Operating Licenses," Statement of Policy, 45 FR 41739, June 16, 1980.

"There is no way to allay that fear except not to build or operate the reactor."[9]

Furthermore, it is hard to see how the Commission can at once refuse to devote resources "to fruitless speculation about ways of mollifying irrational fears"[10] and at the same time say that "the most appropriate way to take account of fears related to TMI is, first, to assure that the technical decision on restart is sound; and, second, if the decision is to permit restart, to make sure that the public understands, through accurate and comprehensible information, fully disseminated, the basis for the Commission's determination that the plant can operate safely."[11]

Commissioners cannot take refuge in the agency's inability to deal sensibly with stress while at the same time announcing that the matter is satisfactorily dealt with by measures already taken or in prospect. For one thing, these two propositions are incompatible. For another, no one else has the authority to assess and act upon stress-related issues in the context of licensing a TMI-1 reopening.[12] For another, as the Board itself

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[9] Hendrie opinion, pp. 1-2. For more concrete examples of stress mitigation, we need look no further than last summer's krypton venting at TMI, where public anxiety persisted despite repeated NRC reassurances. This anxiety was in some measure relieved by two events that had no direct relationship to the NRC's appraisal of the radiation hazard: 1) the fact that the venting was for other reasons delayed until summer, allowing parents most concerned about it to take children from the area for as long as they wished without missing school, and 2) a Union of Concerned Scientists' report to Governor Thornburgh concluding that the krypton was not a threat to the public health — a report which was believable to some who would not accept the same conclusion from the NRC.

[10] *Ibid, p. 10.*

[11] *Ibid, p. 2. The same thought is expressed in the Ahearne opinion (p. 2).*

[12] I concur in Commissioner Gilinsky's discussion of this point. It is noteworthy that the Commonwealth of Pennsylvania seems able to do no more than urge us to take stress into account. Those who argue

observed (at pp. 21-22), ". . . to conclude summarily that those fears are baseless and therefore beyond NRC jurisdiction, as urged by the licensee, may produce additional stress in that the public may perceive an attitude that their fears are of no consequence, and that, therefore, they have no control over, or voice in the events affecting them."

* * *

Concerns regarding the treatment of stress in our adjudicatory process overstate the problem. Courts put a dollar value on similar contentions frequently, and for our purposes this is not a narrow issue of fact that is likely to turn on witness demeanor or veracity. The testimony could largely—perhaps entirely—be restricted to health professionals, with recountings and cross-examinings of individual citizen experiences held to a minimum. The Board opinion (pp. 22-23) is sensible on this point and notes that "intervenors have indicated their plans to approach the issue on a broader, more analytical level." As an agency, we would be no less equipped to cope with testimony of this sort than we were to appraise the visual impact of the transmission lines that we ordered rerouted around a Seabrook marsh or the aesthetics on which the staff rejected the Greene County site.

Furthermore, it is important to realize that this is a special case. The TMI accident released far more radiation than any other event at a commercial power reactor in U.S. history. It also resulted in the only evacuation recommendation to citizens around a commercial power reactor. It produced many documented stress-related symptoms, events, and illnesses, and some of the stress and stress-producing factors are likely still to be present. None of these conditions hold true for other

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that by so doing we would "displace the political process" (Hendrie opinion, p. 11) have themselves fought in defense of the federally preemptive approach to nuclear licensing that had largely displaced any meaningful state political or regulatory process for dealing with citizen concerns arising from nuclear power.

reactor sites to remotely the same degree, if at all. Consequently, taking stress into account in post-accident decisionmaking does not commit the Commission to a similar course in other proceedings, a fact which could be made expressly clear. What is being considered here is a small part of a single proceeding, and claims of a serious resource drain—a recurrent theme in various Commission efforts to avoid public challenge [13]—are once again without foundation.

* * *

One final procedural note: Neither the order setting up this proceeding nor the Commission's rules compel a 2-2 vote to mean that stress-related contentions be denied, at least at this time. Indeed, if half the Commission ultimately feels that NEPA has been violated, restart would not be allowed on a 2-2 vote. I would have preferred that the 2-2 vote be taken to mean that the matter is held in abeyance until a Commission majority can rule one way or the other. Ideally, a record on stress could have been built, to be admitted or not when a majority decision was reached. Even if no record were built, the matter should still be considered to be in abeyance while the hearings continue. The real consequence of rejecting the contentions with a promise to revisit them later is to lessen their chances of full consideration by a new commissioner who is likely to feel that the job is large enough without dredging up a matter already laid more or less to rest.

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[13] Hendrie opinion, p. 10. For other examples see: "Further Commission Guidance for Power Reactor Operating Licenses," Statement of Policy. 45 FR 41739, June 16, 1980.

Public Service Company of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), CLI-80-10, 11 NRC 438, 441-442 (March 13, 1980).

Wisconsin Electric Power Company (Point Beach, Unit 1), thus far unpublished order on request for hearing, May 12, 1980 (my dissent, p. 3).

CLI-81-20

Cite as 14 NRC 593 (1981)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-289
(Restart)

In the matter of

METROPOLITAN EDISON COMPANY, *et al.*
(Three Mile Island Nuclear Station, Unit 1)

COMMISSIONERS:

NUNZIO J. PALLADINO, Chairman
VICTOR GILINSKY
PETER BRADFORD
JOHN F. AHEARNE
THOMAS M. ROBERTS

September 17, 1981

On reconsideration of a question on which a four-member Commission had divided equally before, the result of which was to exclude consideration of psychological stress contentions from this restart proceeding, a full Commission, by majority vote, decides to adhere to the previous result.

ORDER

In its Memorandum and Order of December 5, 1980, the Commission stated that it was evenly divided on the question of whether the Licensing Board considering the Three Mile Island Unit 1 restart proceeding should accept contentions related to psychological stress and community deterioration. The order stated that procedurally, the effect of the tie vote was to exclude such contentions from the restart proceeding. The Commission stated that it would "reconsider and vote on

the question when the makeup of the Commission is altered by the appointment and confirmation of a fifth Commissioner." CLI-80-39, 12 NRC 607, 608.

On September 10, 1981, a majority of Commissioners voted to adhere to the result previously reached, *i.e.*, to continue to exclude psychological stress and community deterioration contentions from the restart proceeding.

Separate views of Commissioner Gilinsky are attached.

It is so ORDERED.

For the Commission

Samuel J. Chilk
SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, DC,
this 17th day of September, 1981.

COMMISSIONER GILINSKY'S SEPARATE VIEWS

As the Commonwealth of Pennsylvania had previously recommended that we admit this contention to the hearing, I would have solicited the Commonwealth's present views before acting.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

SEPTEMBER TERM, 1981

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY,

Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and UNITED STATES OF AMERICA

Respondents

METROPOLITAN EDISON COMPANY *et al.*
(PUBLIC UTILITIES),

Intervenors.

Filed April 2 1982.

George A. Fisher
GEORGE A. FISHER
Clerk

Petition for Review of an Order of the United States Nuclear Regulatory Commission.

Before WRIGHT, Circuit Judge, McGOWAN, Senior Circuit Judge, and WILKEY, Circuit Judge.

AMENDED JUDGMENT

This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory Commission and was briefed and argued by counsel. A judgment was issued on January 7, 1982, Judge Wilkey dissenting. In light of changed circumstances and further consideration, this court has decided to modify its order to the Commission. On consideration thereof,

It is ORDERED and ADJUDGED by this court that this case is remanded to the Commission for a determination

whether, since the preparation of the original environmental impact statement for the nuclear facility at Three Mile Island, Unit 1 (TMI-1), significant new circumstances or information have arisen with respect to the potential psychological health effects of operating the TMI-1 facility. The Commission may choose the procedures by which it makes this determination. If the Commission finds that such significant circumstances or information exist, it shall prepare a supplemental environmental impact statement which considers not only effects on psychological health but also effects on the well-being of the communities surrounding Three Mile Island.

It is FURTHER ORDERED and ADJUDGED by this court that, in light of the current operating difficulties at TMI-1, it is no longer necessary in order to preserve the status quo to enjoin the Commission from deciding to restart TMI-1 until it has complied with the requirements of the National Environmental Policy Act (NEPA). The injunction granted on January 7, 1982 is hereby vacated. If subsequently the Commission intends to make a final decision regarding the restart of TMI-1 prior to complying with its obligations under NEPA, it shall provide the court and the petitioner with thirty days' notice thereof.

Opinions to follow.

Per Curiam

For the Court

/s/ George A. Fisher
GEORGE A. FISHER
Clerk

Circuit Judge Wilkey dissents for the reasons stated in his dissent from the earlier Judgment and in his opinion to follow.

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

SEPTEMBER TERM, 1981

No. 81-1131

PEOPLE AGAINST NUCLEAR ENERGY,
Petitioner,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION
and UNITED STATES OF AMERICA
Respondents

METROPOLITAN EDISON COMPANY *et al.*
(PUBLIC UTILITIES),
Intervenors.

Filed January 7, 1982.

George A. Fisher
GEORGE A. FISHER
Clerk

Petition for Review of an Order of the United States Nuclear Regulatory Commission.

Before WRIGHT, Circuit Judge, McGOWAN, Senior Circuit Judge, and WILKEY, Circuit Judge.

JUDGMENT

This cause came on to be heard on a petition for review of an order of the United States Nuclear Regulatory Commission and was briefed and argued by counsel.

On consideration thereof, it is ORDERED and ADJUDGED by this court that the order of the Nuclear Regulatory Commission under review in this cause is hereby vacated.

It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare an environmental assessment regarding the effects of the proposed restart of the

nuclear facility at Three Mile Island Unit One (TMI-1) on the psychological health of neighboring residents and on the well-being of the surrounding communities. The Commission shall then determine, on the basis of this environmental assessment, whether the National Environmental Policy Act requires preparation of a full environmental impact statement.

It is FURTHER ORDERED and ADJUDGED by this court that, until the Commission has complied with the requirements of the National Environmental Policy Act as described in the preceding paragraph, it shall not make a decision to restart TMI-1.

It is FURTHER ORDERED and ADJUDGED by this court that the Commission shall prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.

Opinions to follow.

Per Curiam

For the Court

/s/ George A. Fisher
GEORGE A. FISHER
Clerk

Circuit Judge WILKEY dissents. Whether designedly so or not, this order will bar the resumption of furnishing nuclear power from TMI-1, at which there has never been an accident, until such time as the Nuclear Regulatory Commission satisfies this court, first by an "environmental assessment," and then, most likely, later by a required "full environmental impact statement," as to its consideration of certain new environmental factors. This delay is imposed because of the asserted impact "on the psychological health of neighboring residents," an "impact" which has never before been considered as covered by the National Environmental Policy Act.

This is yet another example of a court inventing new procedural requirements for an administrative agency in a manner

which has enormous substantive consequences. *See Vermont Yankee Nuclear Power Corp.* v. *NRDC*, 435 U.S. 519 (1978). The court is concerned that "the well-being of the surrounding communities" be assessed, yet while this is taking place, for the communities near TMI-1 it will be a colder winter than predicted.

NATIONAL ENVIRONMENTAL POLICY ACT

Sections 2, 101 and 102 (42 U.S.C. §§ 4321, 4331, 4332)

§ 4321. Congressional declaration of purpose

The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

Pub. L. 91-190, § 2, Jan. 1, 1970, 83 Stat. 852.

§ 4331. Congresssional declaration of national environmental policy

(a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate

Federal plans, functions, programs, and resources to the end that the Nation may—

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Pub. L. 91-190, Title I, § 101, Jan. 1, 1970, 83 Stat. 852.

§ 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the

Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement of such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter.

Pub. L. 9-190, Title I, § 102, Jan. 1, 1970, 83 Stat. 853; Pub. L. 94-83, Aug. 9, 1975, 89 Stat. 424.

[October 5, 1979]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKET NO. 50-289

In the matter of

METROPOLITAN EDISON COMPANY, *et al.*
(Three Mile Island Nuclear Station, Unit No. 1)

PEOPLE AGAINST NUCLEAR ENERGY
DRAFT CONTENTIONS

Pursuant to 10 CFR 2.714(b) and the Atomic Safety and Licensing Board's Order of September 21, 1979, People Against Nuclear Energy (PANE) submits the following draft contentions:

1.) Renewed operation of Three Mile Island, Unit 1 (TMI 1) would cause severe psychological distress to PANE's members and other persons living in the vicinity of the reactor. The accident at Unit 2 has already impaired the health and sense of well being of these individuals, as evidenced by their feelings of increased anxiety, tension and fear, a sense of helplessness and such physical disorders as skin rashes, aggravated ulcers, and skeletal and muscular problems. Such manifestations of psychological distress have been seen in the aftermath of other disasters. The possibility that TMI Unit 1 will reopen severely aggravates these problems. As long as this possibility exists, PANE's members and other persons living in the communities around the plant will be unable to resolve and recover from the trauma which they have suffered. Operation of Unit 1 would be a constant reminder of the terror which they felt during the accident, and of the possibility that it will happen again. The distress caused by this ever present spectre of disaster makes it impossible for the NRC to operate TMI 1 without endangering the public health and safety.

2.) Renewed operation of TMI 1 would cause severe harm to the stability, cohesiveness and well being of the communities in the vicinity of the reactor. Community institutions have already been weakened as a result of a loss of citizen confidence in the ability of these institutions to function properly and in a helpful manner during a crisis. The potential for a reoccurrence of the accident will further stress the community infrastructure, causing increased loss of confidence and a breakdown of the social and political order. Sociologists such as Kai Erikson have documented similar phenomena in other communities following disasters.

The perception, created by the accident, that the communities near Three Mile Island are undesirable locations for business and industry, or for the establishment of law or medical practice, or homes compounds the damage to the viability of the communities. Community vitality depends upon the ability to attract and keep persons, such as teachers, doctors, lawyers, and businesses critical to economic and social health. The potential for another accident, should TMI 1 be allowed to operate, would compound and make permanent the damage, trapping the residents in disintegrating and dying communities and discouraging the influx of essential growth.